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ABSTRACT

The document presents the final report of a project to develop and validate a three-phase system of individualized criterion-referenced assessment instruments to provide professional decision makers with reliable information regarding a mentally handicapped person's skill level at different stages of normalization training. An overview of deinstitutionalization of the mentally handicapped is provided, along with a position statement on assessment in mental retardation and background information for the project. The bulk of the report describes the instruments, which include a prescreening instrument to identify the most appropriate candidates for movement to more intensive training environments, post-entry monitoring instruments to assess individual behavior related to levels in independent living alternatives to monitor those areas in which direct training will prepare the individual to move to a less restrictive community program, and a skill checklist to evaluate level of functioning related directly to a specific placement in a community living program. Each instrument is discussed in terms of such aspects as development, validity, reliability, and format. It is concluded that the profiles provide a reliable and valid information system for use in planning and implementing services for the mentally handicapped along the continuum from restrictive to less restrictive living alternatives. (DLS)

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FINAL REPORT

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INDIVIDUAL ANALYSIS AND PRESCRIPTION PROFILES FOR DEINSTITUTIONALIZATION

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ATTACHMENTS

Copies of Pre-Entry Screening, Post-Entry Assessment for Age 8 Through Adult, Post Entry Assessment for Ages Birth Through 8, and the Community Living Skills Profile are attached. All four of these instruments appear in the most current form as developed and utilized in the initial validation studies. These four instruments complete the SEVTC three phased Assessment System for Deinstitutionalization of Moderately to Severely Retarded.

The Pre-Entry Screening and the adult version of the Post-Entry Assessment are in a form which was developed as a first attempt to provide a publishable form.

The second two instruments appear in the form used for initial validation studies.

At the present time work is continuing to revise the instruments by incorporating additional changes which have been identified as a result of the validation studies.

These changes are generally related to improvements in the instructions for administration, refinement of the testing materials descriptions and/or the assembling

of an assessment kit for the Post-Entry Assessment Scales which would contain any test items that may be difficult to procure locally, and the refinement of the format for administration to achieve both convenience and economy. At the present time the format of the two initial instruments has proven popular and if this format can be achieved economically for all of the instruments, appears to offer the most attractive packaging options. Although, the validation data gives the authors an extremely high level of competence in the reliability and validity of the three phased assessment system, this additional work is required to make the system available nationally.

ABSTRACT

Professional and community demand have brought significant changes in service alternatives and programs for the moderately to severely mentally retarded. The most significant is the emphasis on normalization and deinstitutionalization. These changes in emphasis have increased the demand for assessment/monitoring systems which can be easily managed and utilized in programmatic environments. This Project has concentrated on the development and validation of a three phase system of individualized criterion-referenced assessment instruments which relate to three levels in the service continuum leading to deinstitutionalization. These include screening to identify individuals who are the most appropriate candidates for movement to more intensive training environments (the Pre-Screening Instrument), an observation-based assessment of individual behavior related to levels of independent living alternatives to assess the entry and monitor those areas in which direct training will prepare the individual to move to a less restrictive community program (Post-Entry Assessment A & B) and a skill checklist used to evaluate an individual's level of functioning related directly to a specific placement in a community living program (Community Living Skills Profile). The Pre-Entry Screening Instrument provides a rapid and reliable evaluation for decisions about the appropriateness of moving an individual from a more restrictive to a less restrictive training alternative. This instrument assesses the individual's present functional level in verbal communication, toileting, dressing, undressing, eating, and mobility and provides a profile chart summary of skills. The Pre-Entry Screening also provides information on maladaptive behaviors, a series of factors related to present ability to live independently, a summary of existing personal data, information related to family involvement, a brief summary of medical factors, a list of programs in which the individual is currently or has recently been involved, and a format for evaluating a direct standardized verbal contact with the individual. The instrument has been formatively validated and has a substantial data base which was developed for summative validation and which indicates that the information collected is highly reliable.

The Post-Entry Monitoring instrument provides a detailed assessment based on observation to assist in developing and monitoring an individual's program plan. This instrument provides a profile based on the individual's skill in motor, self-help, academic, language, and socialization skills. Level 1 performance indicates skill needs which requires constant supervision and assistance while Level 5 represents independent living with only minimal or occasional supervision. The design of the instrument also facilitates its being used to monitor individual progress during the implementation of the training plan. The contents of this instrument have been formatively and summatively validated and demonstrates high reliability coefficients in split half, inter-observer and test-retest conditions and has high validity coefficients in two studies on which results were correlated with independent evaluations of individual readiness for functioning on a one to five scale with one maximum dependence to five, indicating minimum dependence and in a study conducted comparing profile results with the results of a team administered AAMD behavior scale.

The third instrument is a behavior skills checklist which consists of selected items that provide estimates of the individual's skills as they are appropriate to various community living alternatives. This instrument provides information which allows service providers to compare the individual's strengths and weaknesses with the requirements for participating in an available community program. The three phase SEVTC Assessment Profiles provide a reliable and valid information system to planning and implementation of services along the continuum from restrictive to less restrictive living alternatives.

Chapter I

OVERVIEW

In the past, large state institutions have been the most prominent symbols of services for individuals with mental retardation. In the traditional institution, it has been necessary to accommodate large numbers of individuals. This approach has often led to the impersonal qualities and dehumanizing effects attributed to such facilities (Baroff, 1974). Typically, choices available to the developmentally disabled have been limited and the person either has been kept at home without the support or benefit of services or he has been placed in an institution for total life care (Baroff, 1974). As a result of inevitable institutional conditions such as understaffing, overcrowding, and underfinancing, many dehumanizing practices have existed. Furthermore, institutional staffing and program resources have necessitated the restriction of choice; the systematic elimination of independent opportunities; the denial of the right to learn and grow; lack of privacy and lack of personal possessions; and in short, the deprivation of individualism by unchangeable routines. Institutional life in the past custodial facility has been found to stifle personal growth and to foster the development of dependency patterns which prepare the individual for continued residence in such facilities rather than for life in the community. Although the rigid routines adhered by to many institutions are said to be necessary for the maintenance and care of a large number of individuals by a small number of staff, they contribute to the loss of self-image and lead to negative expectations on the part of the person. In most instances, the need for uniformity and strict routines leave the individual with little decision-making power and control over his own existence. This

inability to control one's life and the resulting feelings of helplessness have been shown to affect the individual's performance seriously and deleteriously (Blatt, 1970). If the ability and the readiness to make decisions are considered to be an important aspect of independence, then the very nature of non-programmatic institutions decreases the opportunities for such experiences.

It is not surprising, therefore, that institutional care increasingly has come under the scrutiny of professionals concerned with the quality of services available for the mentally retarded. This growing data that the typical large, multi-purpose, public residential facility is essentially incompatible with individual growth and development has led to recommendations for replacement by community-based programs and services and legal protection that all persons have the right to learn and to live with dignity (Wolfensberger, 1969, 1971a, 1971b; Thurman and Thiele, 1973). Where the main concern previously was to provide shelter and maintenance, the current emphasis is on the physical, social, and mental growth of the individual within the least restrictive community environment. The development of innovative services is reflected in changes in state and federal legislation as well as in the development of community-based programs and services as alternatives to traditional and total institutionalization.

Most of the current trends in the placement of mentally retarded persons share the implicit assumption that services segregated from the community are no longer justified. Central to this assumption is that community facilities provide a more normal environment and that this type of environment is conducive to personal development and normalization training (Bjannes and Butler, 1974). In addition, it has been shown that individuals with mental retardation learn from taking part in the educational, social, and health services available to the population at large (Perske, 1972).

One concept which has had a major impact on the development of community-based alternatives is the "normalization principle" proposed by Wolfensberger (1972). Normalization refers to a philosophy which developed in the Scandinavian countries. Basically, normalization implies that environments for handicapped persons be as similar as possible to environments found in the mainstream of society (Nirje, 1969). It means offering opportunities and experiences similar to those provided for non-handicapped people. It means exposure to normal patterns of activity, work, peer interactions, recreation, in short, easy access to the ongoing life in the community. Most of all, however, it means what Perske (1972) has termed allowing the individual the "dignity of risk".

In addition to its impact upon the establishment of community-based living alternatives, the normalization principle has also provided the impetus for reconceptualizing the entire service delivery system. That is to say, normalization mandates a trend away from broad categorization and a group approach to individual needs to focus on individual potential. In fact, individualization is an essential feature of normalizing the life of the individual because it pursues maximal integration into the least restrictive environment based on the needs and skills of the individual at any given time. Individualization also means that a range of choices may be offered which allow for continuous movement to other programs or living alternatives which provide for maximum progress. This means individualization as a corollary of the normalization principle perceives the mentally retarded person as an individual who shares the needs, desires, aspirations and frustrations of most people. As a philosophic underpinning for service delivery systems, the normalization principle has encouraged and continues to reinforce fundamental changes in the perception of developmentally disabled people. Instead of regarding the person as incapable of personal and social

growth the focus has shifted to his developmental and learning growth if taught. Hence, normalization is more than a simple plea for fair and equitable treatment (Wolfensberger, 1972). It is a philosophy of human management which assumes that behavior is not only a function of the individual's inherent capacities but also of the demands and expectations of the environment in which the person functions at a given time.

The movement toward developing alternative service systems has been correlated with the professional acceptance of the normalization principle (Wolfensberger, 1972) and has required the use of new teaching technologies to develop and maintain behaviors and skills that conform to the presently prevailing norms of society. The ultimate goal of the normalization principle is the integration of mentally retarded into the mainstream of community social systems (Reavis, Hamel & Morrey, 1976). To achieve community integration goals, living alternatives must be dispersed within and between population centers as part of the community at large rather than being placed away from the community.

As a result of the impact of normalization and deinstitutionalization, i.e. the movement away from large institutions to more "normalizing" environments, some of the lines of demarcation which have hampered individual development in the past have been removed. The national goal of those working in the field of mental retardation is to integrate the developmentally disabled into the mainstream of society. This goal calls for returning individuals from large institutions to their respective communities and mandates the availability of community-based services/ programs which may eventually eliminate institutional placement for the majority of individuals with mental retardation. Considerable progress has been made during the last few years--progress which is most clearly reflected

in the beginning of a decline in the number of institutionalized persons. Until recently, primary beneficiaries of increased discharge rates have been mildly retarded persons (Segal, 1971). However, normalization and community integration are goals which apply equally well to all individuals with mental retardation regardless of severity.

In view of contemporary efforts toward deinstitutionalization and the integration of individuals with developmental problems into the community, it becomes critical to establish methods for coordinating programs for achieving these goals. Individuals with mental retardation frequently have not been evaluated appropriately to maximize their chances of learning skills for community living. If functional independence is advocated as the ultimate goal for all individuals with mental retardation procedures must be established which document individual progress towards that goal. These procedures include survey, assessment, evaluation, and monitoring processes based on the recognition that the developmentally disabled individual, like everyone else, functions at different levels of independence at various stages of his life. His level of independence, as for most people, is primarily a function of the type and quality of the environment to which he is exposed. That is, in a very restricted environment unsupplemented by systematic training efforts, developmental gains are minimal. On the other hand, a carefully planned and individually tailored training environment provides the developmentally disabled individual with a repertoire of adaptive skills that is a prerequisite for successful living in a community setting. A person's level of functioning may, therefore, range from complete dependence to full independence, depending upon the kind of programs and resources provided by the environment.

Growth along a developmental continuum is facilitated by continuous

meaningful application of performance/skill information. Utilized in this manner, the assessment process becomes an end in itself. However, to say that an individual functions in the mentally retarded range is of little value, unless specific suggestions can be made which identify training areas pertinent to the acquisition of skills necessary for more independent living.

These findings and changes in emphasis suggest the need for new assessment format which can be used to indicate the skills of the moderately to profoundly mentally retarded as a result of instructional experiences. For example, a recent survey of professionals working with the developmentally disabled indicated that 76% expressed a high priority need for innovative assessment materials (Lynch, Shoemaker & White, 1976). There was complete consensus among this group of professionals that without precise measuring tools to monitor the individual's progress, the best-designed programs may be unsuccessful.

In view of the apparent lack of instruments which provide reliable information for individual training program development and implementation and which facilitate placement decisions, a three-phase assessment/prescription system was proposed (Reavis et al., 1975). The system proposed a plan to develop and validate a set of criterion-referenced instruments which could be used to collect reliable information regarding a person's skill level at different stages of normalization training. Normalization and preparatory training for community living are conceived of as a three-phase process with successive moves from (1) restrictive through (2) specialized short-term program-oriented facilities to (3) less restrictive community environments. As the individual progresses from care-dependent status to greater independence and self-sufficiency, instruments are needed which accurately measure the extent of the individual's current behavior repertoire at each

stage and will facilitate the professional decision-making to ensure the individual's continued progress to the most independent least restrictive living situation.

In accordance with recent trends in the placement and training of the mentally retarded, the first phase of the Project developed the Pre-Entry Screening Instrument, which was designed to initiate the integration process by identifying individuals living in non-programmatic environments who were candidates for training and treatment as short-term, specialized facilities.

The second phase represents the effort to provide a standardized criterion reference scale with direct relevance to developing I.H.P.'s (Individual Habilitation Plans) for use by facilities which focus on providing systematic training and learning experiences. To accommodate this phase of the proposed system, the Post-Entry/Monitoring Instrument was validated to be used by program-oriented facilities and agencies to monitor training programs for individuals to enter less restrictive community living.

Finally, the third year of the Project developed and validated the Community Living Skills Instrument which is based on the rationale that mobility and opportunities for change or advancement are not only essential but legally mandated. The instrument is specifically intended for agencies and individuals who function as managers in community-based living alternatives and who are concerned with helping the mentally retarded person to move through a variety of living alternatives. The Community Living Skills Instrument is an assessment device designed to facilitate placement decisions in accordance with the individual's performance level.

Chapter II

POSITION STATEMENT ON: ASSESSMENT IN MENTAL RETARDATION

This survey of the most frequently employed instruments and assessment devices used in the field of mental retardation is intended to clarify and support the need for reliable and valid assessment procedures which have direct programmatic use to facilitate successful community integration from age two through adult life.

The assessment of levels and degrees of mental retardation has traditionally been based on tests of measured intelligence. Before the advent of intelligence tests, judgments of mental development were based entirely on subjective interpretations and indices such as head measurement, vital capacity or academic failure, to say nothing of the interviewer's personal "bias and sixth sense" (Skodak Crissey, 1975).

Institutionalization in the past had often been based on the premise that limited intellectual capacity precludes the individual from being able to care for himself. When the prospect of objective and quantifiable measurement of intellectual abilities became reality with the publication of the Binet Scales (Terman, 1916), intelligence tests soon became the primary, and quite frequently, the sole criterion for identification and classification of mental retardation. The intelligence quotient derived from these tests soon became a static designation of presumably innate intellectual potential. In the case of the mentally retarded, potential was equated with deficiency, rigidity, and lack of adaptive resources. At the same time, the concept of fixed intelligence was reinforced by research results which evaluated problems of mental development on the basis of a genetic etiology.

The static IQ score quickly assimilated all the negative properties of stigmatizing labels which were applied to a wide range of mental handicaps.

For example, a person who obtained an intelligence quotient of 20 on the Stanford-Binet test was classified as profoundly retarded to indicate his presumed inability to respond to simple and gross stimulation and his total lack of being able to profit from experience. This classification was then used as an explanatory concept to label the individual as a candidate for a total institution and as requiring extensive continuous care. Although labels are intended as shorthand terms to facilitate communication, they unfortunately conjure up stereotypes which are very resistant to logical argumentation or proof to the contrary.

The problem of labeling turned out to be especially critical for mentally retarded individuals because of the considerable heterogeneity of symptoms and degree of impairment found among those who carry the label. The differences between a profoundly mentally retarded person with severely handicapping physical defects and serious emotional disturbances and the moderately to mildly mentally retarded person whose developmental disability is better described as the result of unfavorable environmental experiences rather than deficient mental abilities exemplify the great variability encountered among mentally retarded individuals. Once the label has been affixed, it rapidly turns into a destructive, self-fulfilling prophecy. Because labels largely determine how the individual is perceived by others, society tends to avoid interactions with stigmatized people, thereby reducing the opportunities to correct the stereotype. However, it has been clearly demonstrated that most communities will accept a mentally retarded person until he is labeled as such. At that point, many people tend to reject him (Cherington and Dybwad, 1974).

The introduction of the Vineland Social Maturity Scale (Doll, 1935) changed the basic criterion for classifying mental retardation from intellectual deficits to social competence. Instead of determining the "pure" level

of intelligence by means of standardized intelligence tests, the individual's capacity for looking after himself in basic social activities is measured. The Vineland Social Maturity Scale was a measure of developmental progress since it did not measure a global concept like intelligence but outlined progressive maturation in self-help, self-direction, locomotion, and social relations. In addition, this instrument offered some assistance in determining training objectives by indicating the relative aspects of social competence. Nevertheless, in spite of the practical advances, Doll's criteria still implied that social incompetence is the result of intellectual deficiency.

In addition to the Vineland Social Maturity Scale, a number of newly developed instruments contributed to the refinement of the assessment process. An analysis of the most commonly used instruments was presented by Reavis, Oksner, Hylton and Morrey (1975). This analysis clearly pointed out that diagnostic and assessment data are valuable only if they can be interpreted and reported in a manner which has application for programmatic usefulness for those who are in daily contact with the person.

In recent years, however, the entire notion of assessing the mental status of individuals with developmental problems by the means outlined above has come under heavy scrutiny. While, for some mentally retarded individuals, intellectual limitations may be a contributing factor, social, familial, and environmental deficiencies are equally important as determinants. The IQ score, as well as labels such as "Trainable Mentally Retarded" and "Educable Mentally Retarded", clearly failed to separate those who intrinsically cannot learn all the mental skills deemed necessary in contemporary society from those of innately higher intelligence whose opportunities have been stunted by social conditions. In addition, there has been a continuously growing body of research which seriously questions the usefulness

of the concept of intelligence in classification and training of the mentally retarded.

One line of evidence is derived from studies investigating adjustment of the mentally retarded after release from an institution. The majority of these studies of postinstitutional success stressed that other factors, such as age, personality, work skills, and socialization are more important than intelligence (Floor et al., 1971; Kraus, 1972). Since the relevance of intelligence to community adjustment has not been established, the validity of intelligence scores as predictors of future behavior is questionable.

Classification on the basis of intelligence test scores has not only been criticized because of the lack of predictive validity but also because of the fact that intelligence tests do not systematically take the socio-cultural background of the person into account when interpreting the meaning of the score and making decisions about placement alternatives (Mercer, 1973). This factor is especially crucial since disproportionate numbers of individuals from lower socioeconomic levels and delinquency-producing environments are being labeled mentally retarded. This type of sociocultural background typically includes conditions such as a home in which parents may be unsuccessful economically, below average intellectual ability, are of undesirable personal habits, or are ineffective in discipline. Furthermore, high-risk individuals are frequently exposed to unsatisfactory models and conflicting standards. When a child with a predisposition toward problems in cognitive development is raised under such circumstances, mentally retarded developmental rates can more easily be examined.

It is now almost universally accepted that intelligence tests measure only what a person has learned. Biological, innate, pure intelligence, i.e. the genotype, cannot be measured. An individual's genetic potential

is always expressed through behavior acquired in a social and cultural setting, that is, his phenotype. Because learning takes place in a socio-cultural setting, the quality of this setting is as important as innate potential. If the environment is characterized by poverty, neglect, malnutrition, and lack of stimulation experiences, an individual cannot express this genotype regardless of his potential.

This interaction between innate potential and environmental conditions has been well documented by various lines of research. For example, research concerned with the learning characteristics of mentally retarded persons strongly refutes the notion of qualitative learning differences between normal and retarded children. Very little data is available to support the thesis that differences exist when mental age is held constant. For example, Miller, Hale, and Stevenson (1968) found that, for groups of equal mental age, learning was similar for normal and mentally retarded individuals although the mentally retarded were somewhat poorer in conversation and probability. Most of the evidence today indicates that individuals with mental retardation learn in the same way as other people do. When acquiring a specific skill or mastering a given task, the person with developmental problems shows little or no difference from normal people of the same intellectual developmental level, i.e. mental age.

A new dimension was added to current thinking in regard to assessment and evaluation of the developmentally handicapped person when the concept of adaptive behavior (Heber, 1961) was introduced. Adaptive behavior was said to refer "primarily to the effectiveness with which the individual copes with the natural and social demands of his environment." This concept was translated into a new instrument (Nihara, Foster, Shellhass, and Leland, 1969) -- the AAMD Adaptive Behavior Scale. However, adaptive behavior as

a dimension has failed to take its place as a separate and distinct entity because it is still related to measured intelligence, a fact which has often created confusion.

The lack of independence between the dimensions of intelligence and adaptive behavior can be easily demonstrated in the example of individuals with Down's Syndrome whose IQ's may range from 25 to 40. In spite of this low level of measured intelligence, these individuals acquire a considerable repertoire of self-help skills. In addition, they often function well in interpersonal relationships and benefit from vocational training. Thus, in terms of measured intelligence, these people, in the past, have been classified as severely retarded. In terms of adaptive behavior, however, a designation of moderate or mild retardation is becoming more appropriate. On the other hand, individuals with a diagnosis of hydrocephalus usually require total nursing care and would be classified as profoundly mentally retarded in terms of their adaptive behavior. However, many of these individuals score in the 70's or 80's on standardized intelligence tests and would be classified as borderline if the level of mental retardation is defined in terms of measured intelligence.

The construct of adaptive behavior is inadequate for a number of reasons: (1) it does not take into consideration the person who is severely physically handicapped and functions in the severely/profoundly retarded range as a result of his physical impairment, (2) the concept is directed toward the measurement of absolute capacity rather than growth and development, and (3) it has not established itself as a dimension independent of intelligence. In addition, it has been pointed out that adaptive behaviors represent dimensions of performance, not of personality (Rosen, Clark & Kivitz, 1977) and is, therefore, not consistent with standards of adjustment.

The construct does not take into account the many personality, motivational, and emotional variables that may determine a person's adaptive or maladaptive behavior. Acceptance of adaptive behavior as the sole criterion of adjustment of the mentally retarded person could be more detrimental than acceptance of the IQ alone as a criterion. In the case of adaptive behavior, the danger would lie in the reduction of efforts to provide training conducive to the development of higher order skills since the ability to maintain oneself independently represents only the lowest level of functioning.

While the practice of using intelligence testing as the basis of classification and placement decisions became the subject of numerous criticisms, the search for altered approaches to the measurement of learning outcomes became more and more prominent (Glaser, 1961). The introduction of criterion-referenced measurement (CRM) represented a radical departure from the traditional norm-referenced approach to testing. While a number of different definitions of criterion-referenced measures have been proposed (Glaser, 1963; Popham and Husek, 1969; Livingston, 1972) the definition by Glaser and Nitko (1971) is probably the most flexible one. These authors define a criterion-referenced test as an instrument which is deliberately constructed as to yield information that is directly interpretable in terms of specified performance standards.

When norm-referenced measures such as intelligence tests are used, the main concern is to find out how much a person's score deviates from the mean for his group. With criterion-referenced testing, on the other hand, the concern is with how far a person's score deviates from a fixed standard, i.e. the criterion. Therefore, the individual is compared with an established criterion such as an absolute performance standard rather than standing in comparisons to other individuals. Whereas norm-referenced

tests are specifically constructed to maximize the variability of scores, scores on a criterion-referenced test will tend to be homogeneous. Ebel (1971) elaborated on the essential difference when he stated that in norm-referenced measurement, the scale is essentially anchored in the middle, i.e. on an average level of performance for a specified group of individuals. Consequently, the units on the scale are a function of the distribution of performances above and below the average. In case of criterion-referenced measures, however, the scale is anchored at the extremities, i.e. a score at the top indicates complete proficiency of a clearly defined task while a score at the bottom reflects complete absence of the skill in question.

The fundamental distinctions between norm- and criterion-referenced measurement had important implications for assessments in the field of mental retardation. Criterion-referenced measures are based on the assumption that a continuum of skill proficiency exists, ranging from total incapacity to proficient performance. At any given time, a person's level of competence falls at some point on this continuum and is reflected in the behaviors he performs during the assessment. The standard against which the individual's performance is compared is the criterion, i.e. a specified behavior or performance level which defines each point along the skill acquisition continuum.

This change in assessment from measuring 'what' instead of 'how much' holds considerable promise for those whose mental and cognitive abilities are limited because it more perfectly correlates with the shift from special training in how to learn to training on what the skill is to be learned. Furthermore, the criterion-referenced approach to measurement provides a means of finally being able to use assessment information in a programmatically meaningful way. Given a continuum of competence and

proficiency, an individual's score on a criterion-referenced test provides explicit information as to what the individual can do or cannot do. In addition, criterion-referenced measures reflect the degree of competence displayed at a particular time independent of any reference to performance by others.

In teaching individuals with developmental problems, comparisons among individuals are rarely appropriate. Instead, in most instances, the interest focuses on whether or not a person possesses a particular ability or skill. Since both approaches to assessment, norm-referenced as well as criterion-referenced, require the same psychometric properties for a given instrument in terms of reliability and validity, the essential difference between the two is not so much the different concepts of measurement, but is found in the use of the results obtained. While there is usually a low degree of overlap between the objectives of training and norm-referenced tests, the overlap for criterion-referenced measures is absolute in the sense that the objectives of training are testing outcomes.

The recent development of criterion-referenced measures as an alternative approach to assessment and the almost concurrent development of alternative service delivery systems for individuals with developmental problems provided an ideal opportunity to combine these two features in a new instrument which is conceptually anchored to the normalization principle and the developmental model. The criterion-referenced approach to assessment easily absorbs these concepts since it is based on an underlying continuum which may be described as incompetence-competence, inability-ability, or dependence-independence. The recognition that people have varying degrees of abilities and skills which can be developed to achieve independence is best reflected in a criterion score which represents a person's ability level while simultaneously carrying implications for program prescriptions.

Chapter III

CONCEPTUAL BACKGROUND

The project was developed around three fundamental concepts: (1) deinstitutionalization, (2) normalization, and (3) community integration. According to Wolfensberger (1972), the principle of normalization evolved from a deliberate attempt to translate the nationwide search for alternatives to traditional institutional care into a workable concept for practical application. One goal of the normalization principle is the attainment of adaptive behavior. Essentially, this mandates that a continuum of services be available to every person, based on his individual needs. These services should supplement training and learning opportunities with everyday living experiences which are as close as possible to the norms and patterns of the mainstream of the community.

A temporal corollary of the normalization principle is the redefinition of mental retardation, which can no longer be viewed only as a specifically medical, psychological, social or legal concept. The new definition stresses the behavioral competence of the individual and the relationship of that behavior to the standards of a community. Thus, the characteristics of both the individual and community are important in this concept of mental retardation. Berkson (1973) pointed out that, without a statement of the dual characteristics, individual and societal, the concept of mental retardation has no meaning. Similarly, Daniels (1974) expressed a need for a two-way flow of services to provide a guide for the individual in order that he may become more aware of his environment and training to assist the community in integration programs. Zipperlen (1974) expressed the opinion that it would be an unfortunate misunderstanding of the normalization philosophy to believe that only the individual with mental retardation must change,

or be changed, in order to be integrated into the "normal" community.

The communities values and attitudes concerning mental retardation must change.

This is also a training or educational process of normalization efforts.

During the last few years, the normalization principle has been systematically extended into an ongoing process which is frequently referred to as deinstitutionalization. Deinstitutionalization processes have been developed under the influence of numerous court cases, changes in state laws (e.g. Virginia's "Rights of the Resident" Statutory Addition 37.1-84.1, 1974), and national legislation (e.g. the DD Act - PL 94-103, 1975). According to the President's Committee on Mental Retardation (1974), deinstitutionalization encompasses three interrelated processes: (1) the prevention of institutionalization by finding or developing community alternatives for training, living, and care, (2) return to the community of all institutionalized persons through programs of habilitation with the community, and (3) the establishment of a responsive residential environment which protects human rights and which contributes to the expeditious return of the individual to the most normal community-living alternatives. To facilitate this deinstitutionalization process the identification and selection of institutionalized individuals and those living in natural or surrogate homes without receiving training, as well as the implementation of programs and monitoring of program effectiveness for each individual during the habilitation process, have become significant professional responsibilities. According to Scheerenberger (1974), a successful program of deinstitutionalization will require institutional reform, community reform, and legislative reform to ensure that every individual receives a total developmental program individually designed to facilitate community return.

The last concept, community integration, may be defined as those

measures and practices which maximize the individual's community participation (Reavis, Morrey & Hamel, 1976). Integration is the most significant corollary of the normalization principle since it serves both as a major means as well as a goal of the normalization process. Community integration implies that the mentally retarded person has actual contact with non-mentally retarded people and has the opportunity to interact with them in as near normal a learning/living situation as possible. Wolfensberger (1971) described the following integration and normal contacts: (1) to increase the person's opportunity for learning, social growth, and personal development by means of socialization, (2) to interpret him to his nonretarded peers as a citizen in the socio-political constitutional sense, and (3) to reduce the perceived deviancy of the mentally retarded in the eye of the public, that is, to change the attitudes of the public toward the individual retarded persons as well as toward all retarded persons in general. Maximum integration is achieved by providing the individual the most "normal" community setting which allows him movement and communication in ways appropriate to his abilities and typical for his age. Community integration ultimately unifies the other concepts and completes the continuum of phases leading to optimally independent community living: deinstitutionalization training is initiated on the basis of the normalization principle, leading to the goal of --return to the community. Table 1 represents the functional relationships between the three concepts. The predicted outcome of the application of these three concepts is the proliferation of a considerable proportion of services traditionally provided by state institutions into a community-based continuum of service delivery systems.

The project superimposed on this conceptual framework is a three-phase assessment system which traces the goal of community integration as

TABLE 1			
Functional Relationships Between Normalization-Deinstitutionalization-Community Integration			
Concept			
Function	Normalization	Deinstitutionalization	Community Integration
	Philosophy	Process	Goal

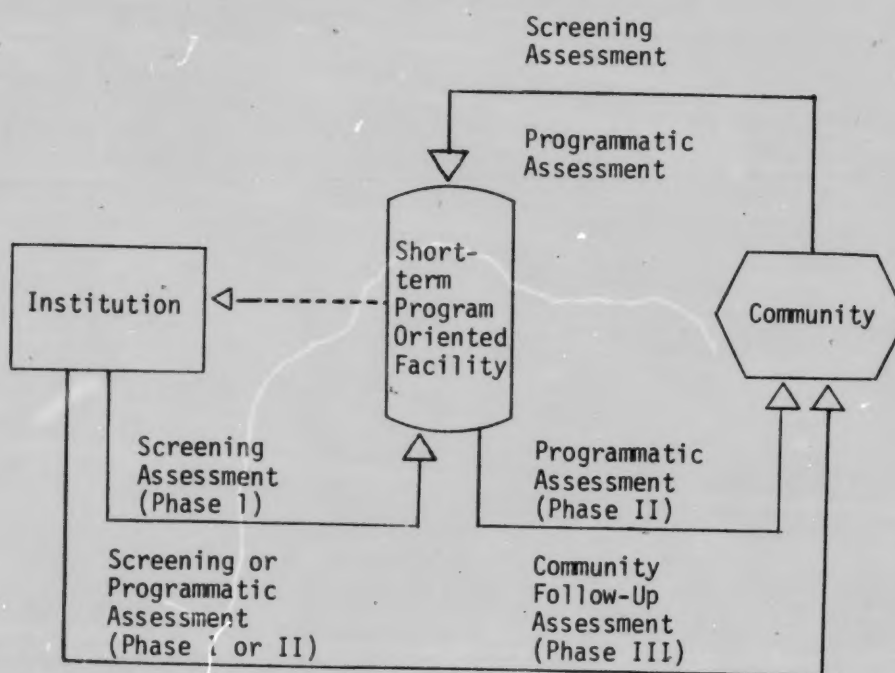
a series of successive moves from (1) long-term institutional (nonprogrammatic) environments through (2) specialized short-term program-oriented habilitation programs to (3) the least restrictive community-living and learning alternatives possible (e.g. public schools, jobs, parental or foster homes, group homes, satellite apartments, etc.). It was hypothesized that, at each of these phases, the adaptation level could be characterized by a phase-specific behavior repertoire which reflects an overall functioning level. Furthermore, it was predicted that, through accurate and reliable identification of phase-specific skills and skill levels, transfer into the optimum environment could be facilitated. Figure 1 depicts the deinstitutionalization concept and the resulting process of community integration conceptualized as a three-phase assessment system.

It should be noted that the three living environments - institution, short-term program-oriented facility, and community - merely represent generic examples for a number of possible living arrangements. For example, the institution is used to symbolize the most restrictive environment. It may be a large state facility or a parental home bereft of programmatic intervention. Similarly, short-term facilities may be regional centers, special classes in public schools, workshops, etc., i.e. any type of environment emphasizing systematic training efforts.

The three-phase assessment model includes three instruments which differ

Figure 1

Community Integration as a
Three-Phase Assessment/Prescription System



in method of assessment, as well as in the extent of the behavior repertoire and the skill complexity to be assessed, depending upon the objective of each specific stage. The first of the three instruments, the Pre-Entry Screening Instrument, initiates the process of community integration by identifying individuals who are currently living in restrictive environments but are immediate prospective candidates for training programs. The underlying assumption is that there is a considerable number of institutionalized persons for whom total care placement is not justified and for whom the institution has become a "catch-all" for the failures of community and family to provide needed services (Begab, 1975). At the pre-entry level then, screening persons for presently available training services is the major objective. As the name, Pre-Entry Screening Instrument, indicates, the

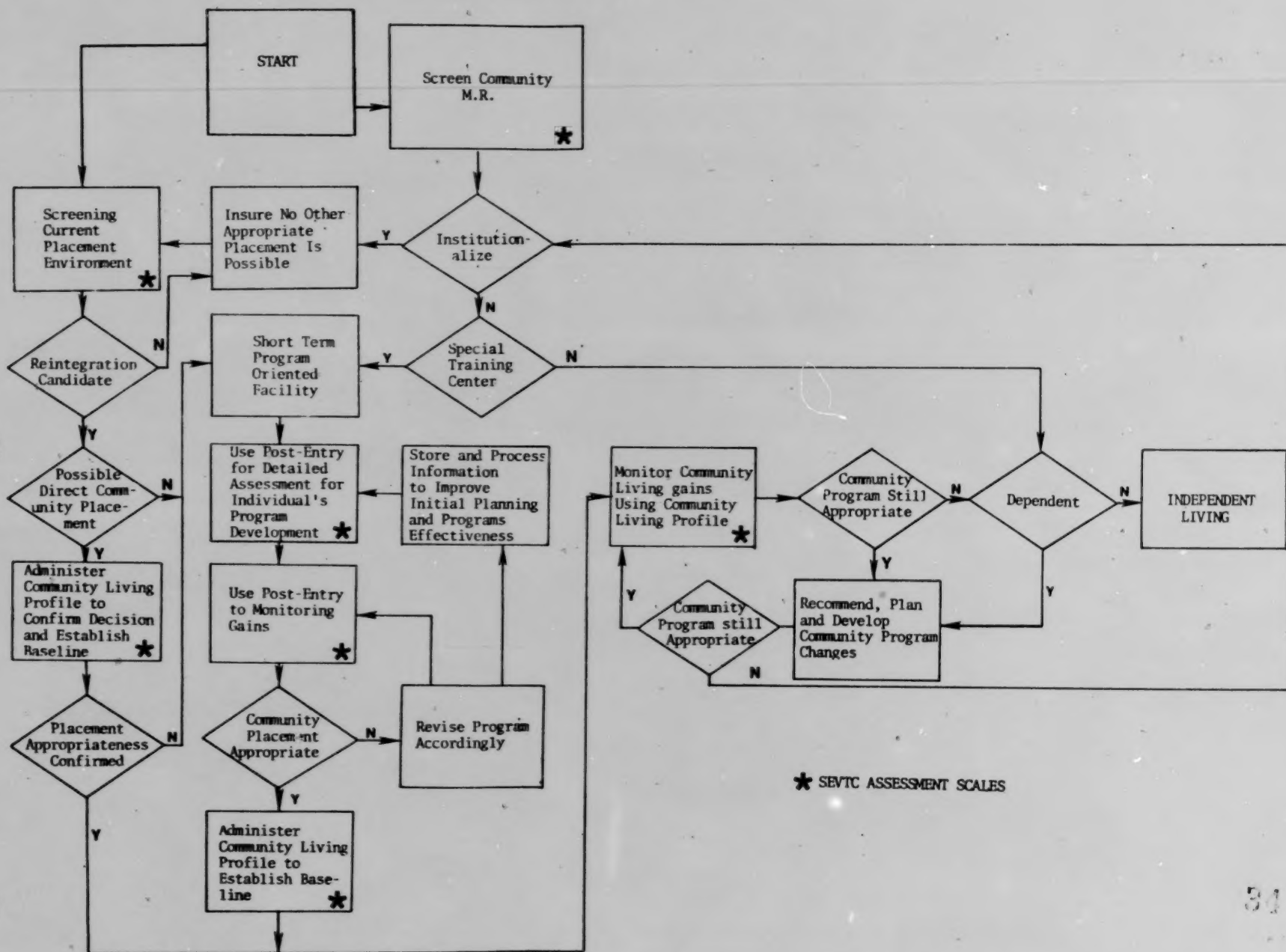
assessments are administered while the individual still lives at the sending environment.

To accomodate phase two, the Post-Entry Monitoring Instrument was developed. Here again, the name implies that the person has been identified as a potential candidate for current training and/or has been moved from a more restrictive placement. He is participating in systematic training programs which have been designed to equip him with skills necessary for further community integration. At this phase, an instrument is necessary which directly measures entry levels to programs and behavioral gains as a function of training. The primary objective of the Post-Entry Monitoring Instrument is to provide an assessment tool which serves the dual function of baseline assessment for the Individualized Habilitation Plan (IHP) and continued program monitoring. After the goal of returning the individual directly to the community has been achieved, an instrument is needed to measure continued progress and movement through a continuum of community based programs.

Life in a community-based living alternative is also not static but constitutes a means for continued growth of skills. If society respects an individual, it recognizes his preferences as the key to the decisions made (Cherington and Dybwad, 1974). Community entry should not imply the termination of services, but rather, it should guarantee the achievement of a level of normalization at which the dimension of choice has been added. Finally, at the third stage, the Community Living Skills Instrument collects survey data on individuals who have been placed in community living alternatives and who are receiving further training to achieve maximal independence.

Each of the three stages of the three-phase assessment system provides behavioral baseline data for decision-making in terms of placement alternatives and program implementation. Figure 2 represents the flow of persons and

Figure 2
From Institutionalization to Community Integration: Movement Through
Residential Services as a Function of SEVTC Assessments



possible placement decisions based on screening (Pre-Entry Screening Instrument), programmatic (Post-Entry Monitoring Instrument), and community follow-up (Community Living Skills Instrument) assessments.

The development of each instrument commenced with the compilation of an item-pool from which the final items for the instrument were selected. As Thorndike (1971) pointed out, there is no automatic process for the production of item ideas. They must be invented or discovered, and, in these processes, chance thoughts and inspirations are important. For both the Pre- and Post-Entry Instruments, a source of item ideas was provided by task analysis of teaching program skills based on developmental levels.

After a large number of potential test items had been collected, the next step in the construction was the collection of data as a basis for improving items and selection of the best available items to make up the experimental form of the instrument. In the case of the Pre-Entry Screening Instrument, empirical trials in the form of a preliminary administration of the items to a small sample of mentally retarded individuals provided the data base for item selection (Reavis, Oksner, Hylton and Morrey, 1975). Selection of final items for the Post-Entry Monitoring Instrument and the Community Living Skills Instrument was based on ratings by professionals in the field. Subject-matter experts were asked to review and judge items to detect factual errors and to locate and eliminate poor or inadequate items. Upon completion of the selection of the final items, an experimental form of the instrument was prepared, along with instructions for subsequent revisions, studies were then designed to establish reliability and validity.

Reliability concerns the degree to which scores obtained by different observers or raters, scores obtained by the same individuals on two different occasions, and scores obtained by the same persons with different sets of

expresses the relationship between the data obtained from the instrument and the data derived from specified criterion variables. Since it is meaningless to discuss validity in terms of a fixed criterion, because criteria differ depending on the purpose of the instrument and the population it is intended for, validation must be an ongoing process rather than an end in itself.

Both reliability and validity concepts require that agreement between measures be demonstrated. A common denominator which most validity concepts share in contradistinction to reliability is that this agreement represents the convergence of independent approaches. The concept of independence is indicated by such variables as "external variable", "criterion performance", "behavioral criterion" (Campbell, 1959). Independence is a matter of degree, and in this sense reliability and validity can be seen as regions on a continuum. In sum, reliability is the agreement between two efforts to measure a trait through maximally similar methods. Validity is the agreement between two attempts to measure the same trait through maximally different methods. The general procedures which have been followed in establishing reliability and validity for the three instruments of the SEVTC-Assessment Scales represent simple modifications of the classical test theory model through applications of the major theorems and assumptions of classical test theory to criterion-referenced instruments.

Chapter IV

PRE-ENTRY SCREENING INSTRUMENT

Development

The development of the Pre-Entry Screening Instrument was the result of a review of current instruments used in mental retardation testing (Reavis, Oksner, Hylton, and Morrey, 1975). Major conclusions of this review and analysis indicated that existing assessment instruments are low in reliability and require major professional investments of time and training for data that often have low correspondence to direct program implementation.

Administration and Scoring

The Pre-Entry Screening Instrument uses a criterion-referenced, response contingent approach (Wood, 1973) to assessment. The instrument is designed as a structured interview conducted with a staff member who has worked with the person for a minimum of three months. It is scheduled at the individual's current living environment and takes approximately 15 minutes. The Pre-Entry Screening Instrument examines seven skill areas: language, personal hygiene, toilet training, dressing, undressing, table behavior, and gross motor skills. To minimize the amount of time required for administration, a number of features have been incorporated in the arrangements of the items to serve as check points at which the interview may be terminated in a given skill area because the answer to the item eliminates the need for further questioning.

The first item in each area is designed to eliminate interviewing the person about skills which the individual is highly unlikely to accomplish due to severe physical or medical limitations. For example, the answer to the question "Are there any physical limitations which would interfere with talking" may be that

the individual in question has a congenital defect in motor speech skills which prevents him from acquiring verbal language skills. In this situation there is no need to question the extent of his language skills (i.e. "uses conversational speech", "uses words", "uses phrases", "uses sentences") because the handicapping condition precludes the individual from speaking. If gross physical limitations do exist, the interviewer blackens the "yes" circle and specifies the type of condition on the answer sheet. If no severely handicapping physical limitations exist, the interviewer proceeds to Statement II.

The second item is designed to expedite the interview if the individual is proficient in the particular skill area. For example, if the answer to the statement "uses conversational speech" is "true", the three qualifying statements under Statement II (i.e. "no help is needed in making his needs known", "speech is generally clear and distinct", "speech can be understood by a stranger") are read. If a qualifying statement is answered "true", the interviewer blackens the circle adjacent to the statement. If all three qualifying statements are marked "true", the interviewer goes directly to the next page without presenting items 3, 4, and 5. In the event that one of the statements is answered "false", Statement III is read.

The same procedure applies to the third item. If the answer to the statement "uses words" is marked "true", it is followed up by the three qualifying items (i.e. "has at least ten words in his vocabulary", "if instructed could repeat up to three words in a row", "words spoken can be understood by most people"). Once the interview has progressed beyond Statement II, the remaining items 3, 4, and 5 are always presented. Statement IV and V follow the same format.

The responses are scored directly on the test pages. Upon completion of the interview the darkened circles represent the skills currently present in the

individual's behavior repertoire. The unmarked circles identify behavioral deficits which need to be remediated.

Additional Data Sheets

In addition to the Skill Profile, two accompanying data sheets are used in the interview with the staff member. The Maladaptive Behavior Checklist gathers information regarding the type and frequency of inappropriate behaviors which are classified as self-stimulatory, aggressive, antisocial, and sexually inappropriate. The second form, entitled Independent Living Checklist, assesses the person's current skills, reflecting independent functioning capabilities for community living.

The following additional information sheets are provided to collect supplementary information from existing records. They are summarized in the pre-entry result. The Personal Data Sheet contains information regarding measured intelligence and vocational history. The Parent Data Sheet gives the receiving environment some indication of parental involvement in terms of numbers of visits made by the parent to the institution or sending environment as well as the number of visits made to the home by the individual. The Medical Data Sheet contains a brief summary of current medication, special diet, and medical or physical problems. The Program Participation Checklist yields basic descriptive information as well as a record of training programs in which the individual has participated during the six months before the date of the interview. Finally, the Interviewer Interaction Checklist is provided to guide the interviewer in a brief personal exchange with the individual. The major purpose of this form is to give the interviewer an opportunity to meet the individual being assessed and note his reaction. These seven forms, along with the Skill Profile, provide the basic information from which decisions regarding placement and program implementation can be made reliably and efficiently.

Sample Population

The first field population of the Pre-Entry Screening Instrument consisted of 26 male and 23 female severely/profoundly mentally retarded residents living at Southside Virginia Training Center, Petersburg, Virginia.

Reliability

After formative testing and a short-term, private residential facility for the mentally retarded and emotionally disturbed, major field-testing for reliability was conducted at Southside Virginia Training Center in Petersburg, Virginia, with 49 persons. Reliability was established in terms of two indices: (1) inter-aide percentage of agreement, which refers to the situation in which three different aides were questioned by one interviewer about each resident, and (2) inter-interviewer percentage of agreement, which refers to the situation in which three different interviewers questioned the same aide about each resident. A criterion level of 80% agreement was established as the desired reliability index for each item. Inter-aide percentage of agreement reached or exceeded the 80% criterion level on 34 out of 40 items on the Maladaptive Behavior Checklist and 15 out of the 18 items on the Independent Living Checklist. The data indicated that the information was reliable and stable over a three-month period of time.

To gain information regarding the "half-life" of the Pre-Entry Screening Instrument, a second retest was conducted six months after the original field test. Table 2 represents the six-month comparison of pre-entry data for the Skill Profile, Table 3 for the Maladaptive Behavior Checklist, and Table 4 for the Independent Living Skills Checklist. In analyzing the data, the results from the two field tests were pooled for a summary due to the considerable population attrition. The first six-month retest was conducted in July, 1975, and the data compared with the results of the original field test in January, 1975. A second six-month retest

TABLE 2
Analysis of Stability of Pre-Entry Data by Items
Over Six-Month Period
Skill Profile

Skill	# of Residents Compared	Inter-Aide % of Total Agreement	# of Residents Compared	Inter-Interviewer % of Total Agreement
<u>Language</u>				
1	11	100.00	17	91.84
2	11	56.25	17	81.63
3	11	71.88	17	100.00
4	11	56.25	17	100.00
5	11	71.88	17	93.88
<u>Vocational Readiness</u>				
6	11	100.00	17	91.67
7	11	55.00	17	62.50
8	11	63.64	17	91.43
9	11	46.15	17	83.78
10	11	57.14	17	83.72
<u>Personal Hygiene</u>				
11	11	100.00	17	100.00
12	11	73.08	17	88.89
13	11	89.29	17	97.83
14	11	60.71	17	93.48
15	11	65.22	17	93.02
<u>Toilet Training</u>				
16	11	100.00	17	100.00
17	11	74.19	17	100.00
18	11	93.55	17	100.00
19	11	93.33	17	100.00
20	11	96.55	17	100.00
<u>Dressing</u>				
21	11	96.67	17	97.96
22	11	62.96	17	82.98
23	11	96.67	17	98.00
24	11	57.14	17	87.50
25	11	45.83	17	86.67
<u>Undressing</u>				
26	11	100.00	17	97.96
27	11	87.10	17	100.00
28	11	90.32	17	100.00
29	11	96.88	17	100.00
30	11	93.55	17	100.00
<u>Table Behavior</u>				
31	11	96.67	17	95.92
32	11	25.00	17	91.49
33	11	84.38	17	100.00
34	11	27.27	17	95.56
35	11	87.50	17	97.96
<u>Gross Motor Skills</u>				
36	11	100.00	17	37.76
37	11	87.50	17	91.84
38	11	93.75	17	100.00
39	11	93.75	17	100.00
40	11	87.50	17	97.96

TABLE 3

Analysis of Stability of Pre-Entry Data by Items Over Six-Month Period
Maladaptive Behavior Checklist

Skill	# of Residents Compared	Inter-Aide % of Total Agreement	# of Residents Compared	Inter-Interviewer % of Total Agreement
<u>Self-Stimulation</u>				
1	11	96.43	17	87.50
2	11	92.86	17	91.67
3	11	82.76	17	97.92
4	11		17	93.33
5	11	77.78	17	70.21
6	11	94.12	17	95.74
7	11	82.35	17	97.87
8	11	84.62	17	93.62
<u>Aggression</u>				
1	11	85.71	17	95.83
2	11	85.71	17	97.92
3	11	61.54	17	64.58
4	11		17	97.78
5	11	94.12	17	100.00
6	11	100.00	17	100.00
7	11	58.82	17	97.37
8	11	47.08	17	80.85
<u>Sexual</u>				
1	11	88.46	17	89.58
2	11	87.10	17	100.00
3	11	100.00	17	100.00
<u>Social</u>				
1	11		17	95.45
2	11	87.10	17	100.00
3	11	94.12	17	95.74
4	11	75.00	17	100.00
5	11	100.00	17	100.00
6	11	100.00	17	95.74
7	11		17	97.78
8	11		17	82.22

TABLE 4

Analysis of Stability of Pre-Entry Data by Items Over Six-Month Period
Independent Living Checklist

Skill	# of Residents Compared	Inter-Aide % of Total Agreement	# of Residents Compared	Inter-Interviewer % of Total Agreement
<u>Social Relationships</u>				
1	11	94.12	17	68.42
2	11	88.24	17	82.61
3	11	86.67	17	89.36
4	11	76.47	17	76.19
5	11		17	97.73
<u>Self-Direction</u>				
1	11	44.44	17	86.05
2	11	66.67	17	93.02
3	11	93.33	17	100.00
4	11	82.35	17	97.87
5	11	100.00	17	100.00
<u>Travel Abilities</u>				
1	11	30.00	17	76.92
2	11	66.67	17	100.00
3	11	75.00	17	100.00
<u>Communications</u>				
1	11	61.54	17	95.24
2	11	94.12	17	95.56
3	11	75.00	17	75.00

was conducted in September, 1975, in order to compare the data collected then with data gathered in March, 1975. Inter-aide reliability exceeded the 80% criterion level on 25 of the 40 items on the Skill Profile and inter-interviewer reliability exceeded criterion level on 37 items. In the case of the Maladaptive Behavior Checklist, measured agreement among aides reached criterion level on 18 of 27 items, while assessments from three different interviewers showed a percentage of agreement of 80% and above on 19 items. Finally on the Independent Living Checklist, agreement among aides reached criterion level on 9 of the 16 items assessed, and agreement among interviewers was established on 13 items at or above criterion level. Table 5 summarizes the reliability data.

The results from the combined field tests indicated that, if the time interval between assessment dates exceeded a three-month period, variances within a set of assessments arose from a number of sources. These include changing levels of ability as a function of maturation and training. In the case of the Pre-Entry Screening Instrument, general, as well as specific and temporary sources of variation, were operating. For example, residents of the sample population had been exposed to fundamental changes in the physical environment in addition to consistent involvement in training programs. Consequently, changes in skill levels were not only expected but desirable because the magnitude of environmental changes and the impact of programmatic intervention were relevant intervening experiences.

The overall results of the six-month retest were consistent with research regarding various other instruments, including achievement, aptitude, and personality tests, which generally indicate that, as the time period between testing dates increases, agreement of correlation between the two sets of data decreases (Anastasi, 1976).

Validation

The original validation sample consisted of 35 residents from Southside Virginia Training Center, Petersburg, who were transferred to SEVTC. The Pre-Entry Screening Instrument was validated by comparing the information gathered on the Skill Profile and the Maladaptive Behavior Checklist acquired from the aides at the "sending" institution with observed behavioral repertoire of the individuals at SEVTC. In order to control the behavioral change over time, all pre-entry assessments were scheduled no more than two weeks prior to the resident's transfer to SEVTC. The validation data are presented in Table 5 in the case of the Skill Profile and in Table 6 for the Maladaptive Behavior Checklist.

TABLE 5
Skill Profile - Validation Data

SKILL	NO. OF RESIDENTS RATED	% OF AGREEMENT*
Vocational Readiness		
1	35	60.57*
2	35	74.28
3	35	60.57
4	35	74.28
Personal Hygiene		
1	35	80.00
2	35	94.28
3	35	74.28
4	35	74.28
Toilet Training		
1	35	94.28
2	35	97.14
3	35	94.28
4	35	100.00
Dressing		
1	35	82.85
2	35	85.71
3	35	88.57
4	35	74.28
Undressing		
1	35	80.00
2	35	94.28
3	35	97.14
4	35	97.14
Table Behavior		
1	35	83.57
2	35	94.23
3	35	85.71
4	35	97.14

*These percentages refer to the agreement between data gathered by Pre-Entry Screening interviews and observation-based data gathered after transfer to SEVTC.

TABLE 6
Maladaptive Behavior Checklist - Validation Data

BEHAVIOR	NO. OF RESIDENTS RATED	% OF AGREEMENT*
Self-Stimulation		
1	35	88.57*
2	35	83.57
3	35	88.57
4	35	94.23
5	35	82.85
6	35	100.00
7	35	88.57
8	35	88.57
Aggression		
1	35	85.71
2	35	82.85
3	35	80.00
4	35	74.28
5	35	82.85
6	35	100.00
7	35	68.57
8	35	71.42
Sexual		
1	35	91.42
2	35	38.57
3	35	85.71
Social		
1	35	82.85
2	35	88.57
3	35	94.28
4	35	94.28
5	35	82.85
6	35	97.14
7	35	91.42
8	**	---

*These percentages refer to the agreement between data gathered by Pre-Entry Screening interviews with aides and observation-based data gathered after transfer to SEVTC.

Validity was checked a second time in October, 1971, when a field test was conducted with 152 residents at Lynchburg Training School and Hospital, Lynchburg, Virginia. In this field test the aides were interviewed using the Pre-Entry Screening Instrument, the Maladaptive Behavior Checklist, and the Independent Living Checklist. On the basis of the responses by the aides, Project staff composed a brief description for each resident. Table 7 presents an example of these descriptions. Of the total 152 descriptions, 93 were submitted to the ward aide carrying the right name. The remaining 59 were submitted under the name of a different individual. The aides were then required to rate the description in terms of its accuracy on a three point scale (1 = inaccurate, 2 = fairly accurate, 3 = very accurate). Of the 93 descriptions with the correct name, 67 were rated as very

TABLE 7

Resident 147

Resident 147 is a microcephalic and has a cleft palate which interferes with his speech. He does not care for his personal cleanliness except for washing and drying his hands and face. He is not completely toilet trained. Resident 147 needs help with dressing and undressing skills except for pulling off his pants. He cannot use a fork without assistance. His physical limitations prevent him from sitting, standing, and walking correctly.

Several times a day, he will rock back and forth while sitting or standing, suck his thumb or hand, look at his hand or wave them in front of his face, touch other people, and drool. He has periods of uncontrollable overactive behaviors, masturbates in public, and hits other people. He does not control his temper, behave in group situations, pay attention to activities for more than 15 minutes, care for his own belongings, look presentable for work or school, or seek help if he is injured. He needs assistance in locating his own ward, traveling around the grounds and using public transportation. He cannot tell time, understand and carry out simple instructions, or receive and relate simple messages.

accurate and 21 received a rating of fair accuracy (total of 88 or 96% were at least fairly accurate descriptions). In the case of the 50 incorrect names, only 16 were found to be very accurate and 6 fairly accurate (total of 22 or 37%). It must be noted that since names of real people were randomly assigned to actual case descriptions to create the "incorrect name" summaries, it is possible that some of the descriptions were at least fairly accurate. The important part of this data is that, the information contained was valid since the aides did find that a high percentage of the correct name descriptions were accurate. Table 8 presents the ratings of the residents' descriptions as given by the aides.

TABLE 8

Resident's Description Ratings

Correct Names				Incorrect Names		
Rating	1	2	3	1	2	3
	4	21	67	37	6	16
n = 93				n = 59		

1=not accurate 2=fairly accurate 3=very accurate

With the completion of the last large scale validation, a total of 759 pre-entry screening assessments have been completed. Figure 3 shows the cumulative number of administrations of the Pre-Entry Screening Instrument.

Pre-Entry Screening Assessments Conducted by Telephone

Reavis, Oksner, Hylton, and Morrey (1975) also suggested that the Pre-Entry Screening Instrument, due to its ease of administration and scoring, potentially could be employed for telephone-conducted interview assessments. This hypothesis was empirically investigated in September, 1975. A sample of 30 residents was randomly selected from the population of Southside Virginia Training Center, Petersburg, Virginia. After the interviews had been scheduled at the institution, telephone contact was made by SEVTC Social Services Department with a staff member who met the requirement of having worked with the resident to be assessed for a minimum period of three months. Using the Skill Profile, Maladaptive Behavior Checklist, and Independent Living Checklist, the assessment interview was conducted by phone and recorded by a social worker at SEVTC. A week after the telephone interviews, Project staff personally conducted the interviews again at Southside Virginia Training Center, Petersburg, with the same aides who had been questioned over the telephone.

The data were analyzed, using a chi-square test. Results indicated there were no differences between telephone and face-to-face interviews. Table 9 represents the analysis of this comparison.

TABLE 9
(n = 30)

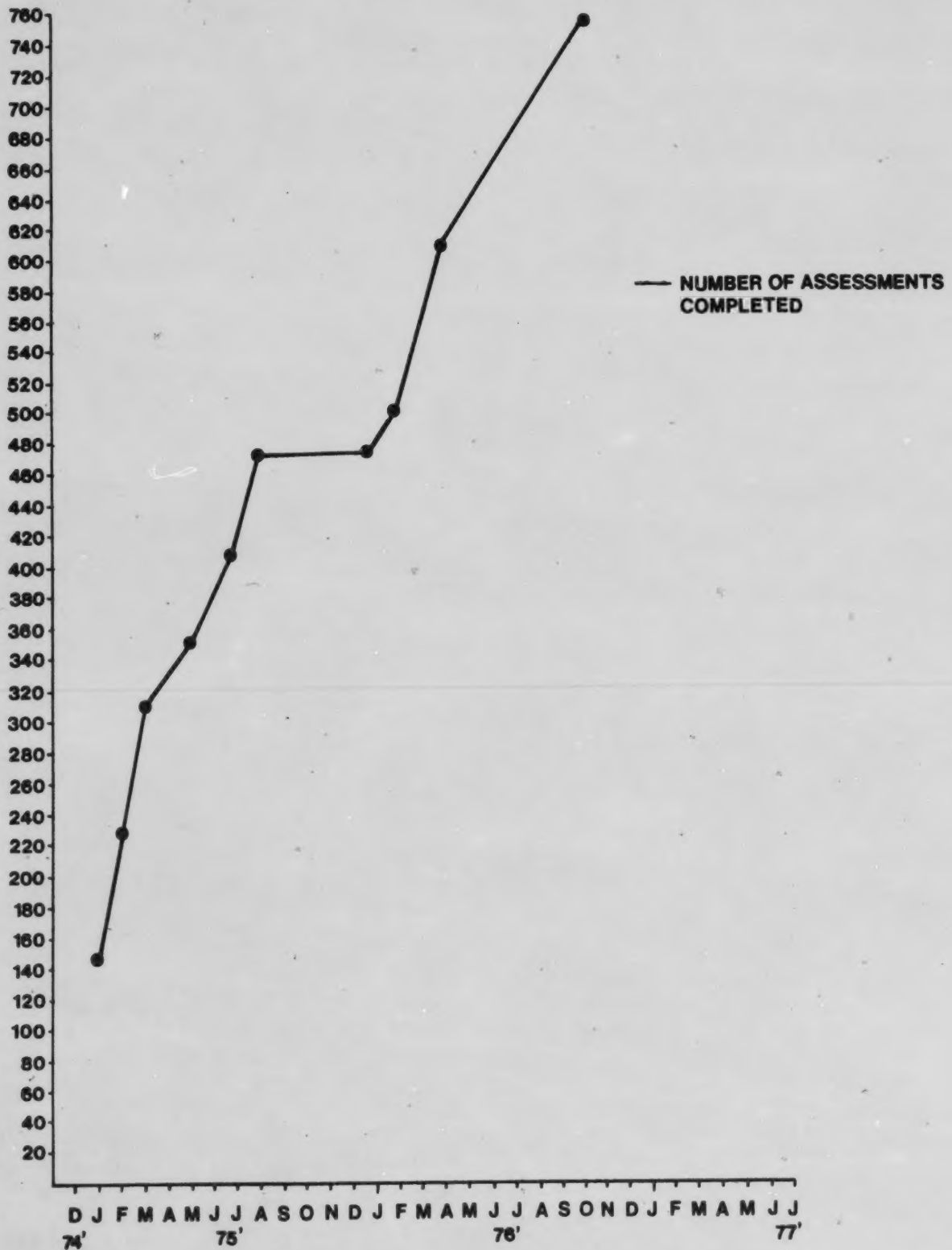
Pre-Entry Instrument: Telephone vs. Personal Assessments

<u>Form</u>	<u>χ^2</u>
Skill Profile	23.75*
Maladaptive Behavior Checklist	13.28
Independent Living Checklist	23.56

*The results were nonsignificant between telephone and personal interviews = 49.59, 29 df, $P < .01$

FIGURE 3

Pre-Entry Screening Assessments



Since the reliability of telephone assessments has been empirically established, telephone assessments with the Pre-Entry Screening Instrument are now conducted on a regular basis by SEVTC Social Services staff to screen potential transfer candidates at Southside Virginia Training Center, Petersburg, and Lynchburg Training School and Hospital, Lynchburg. Between September, 1975, and April, 1976, over 100 institutionalized residents have been screened via telephone.

Revisions

Data from the field-testing with the Pre-Entry Instrument indicated the necessity for a number of revisions in both content and physical format. The major change in content involved the deletion of items assessing vocational readiness. Continued collection of pre-entry data revealed that aide knowledge regarding vocational skills was not reliable and that the skills involved would be more appropriately assessed at a time closer to the individual's transfer to a vocational training program.

In addition, a small number of items which were initially low in reliability were revised, mainly by substituting more behaviorally specific or linguistically less ambiguous terms. For example, the item "if hurt, seeks aid from the appropriate individual" taken from the Independent Living Checklist, was changed by replacing the word "aid" with "help". The item reached criterion on subsequent field testing.

The physical format of the Pre-Entry Screening Instrument has undergone two major revisions to facilitate its use. In its first 1976 revised form, the Pre-Entry Screening Instrument consists of an easily handled test booklet of standard 8 1/2 x 11" size. The page layout uses vertical columns of circular holes, with a separate page reserved for each of the seven skill areas assessed. A single separate answer sheet which slides under the pages in the test booklet is provided for responses to the items. The use of a booklet with separate answer sheets has

considerable advantages as far as economy is concerned since the booklet can be used numerous times and the scoring process can be carried out more efficiently. Presently, the scoring is by hand; however, the answer sheet can be easily adapted for machine scoring.

Another area of revision concerned the name of the instrument. During the first year of the project, the Pre-Entry Screening Instrument was referred to as AIM (Assessment Interview Method) to describe the procedure by which the information is collected. However, as new data were gathered and especially as the development of the Post-Entry Instrument progressed, the need for a composite title encompassing all three instruments of the proposed system became apparent. Specifically, a title was needed which not only gave an indication of the purpose of the instruments but also reflected the underlying philosophy. Consequently, the underlying normalization - community integration model was adopted as the generic name in "SEVTC Assessment Scales for Community Integration of Severely/Profoundly Handicapped". The components of the three-phase assessment system are identified in general terms as

- | | |
|----------|---|
| Part I | Pre-Entry Screening Instrument |
| Part II | Post-Entry Monitoring Instrument (Part A & B) |
| Part III | Community Living Skills Instrument |

The Pre-Entry Screening Instrument is intended as a screening device which maximizes time efficiency. The instrument does not attempt to yield a complete picture of the individual but attempts to provide data relevant to decision-making based on analysis of skills and skill levels for community and/or training center entry. Once the individual has been identified as a prospective candidate for the intensive, systematic training available at short-term, specialized community facilities, the Post-Entry Monitoring Instrument will be administered. This is an extensive, observation-based assessment tool to measure individual competence in five behavioral domains: motor development, self-help/independent living,

language, cognitive, and socialization. For those individuals who are not immediately transferred following pre-entry screening, the information collected during the interview provides data instrumental for programmatic placement decisions at the sending environment.

Chapter V

POST-ENTRY MONITORING INSTRUMENT

Part A: Preschool Scales: From Birth to Age Eight

Introduction

In the past, assessment of preschool and school aged children has consisted of the administration of a series of individually administered tests, including, for the most part, standardized intelligence tests such as the Stanford-Binet (SB) or Wechsler Intelligence Scale for Children (WISC). In many states, a child cannot be labelled mentally retarded in the public school without an intelligence test individually administered by a trained person certified by the state (Mercer, 1973). In addition the Bender-Gestalt is frequently included to gain information on possible neurological impairment. Interpretation of these test results was then used to prescribe a program plan for the child.

As in the case of adult intelligence tests, these methods and instruments employed in assessing and assigning children to classes for the mentally retarded have come under attack (Beck, 1975) because most of these procedures assume that test performance predicts future abilities. More specifically, the use of procedures for the assessment of children's cognitive functions are considered extremely ineffective since these tests have been primarily based on pathology with the end result being the labeling of a child's particular disability with little concern evidenced for the development of a prescription for a specific remedial educational approach (Hausman, 1969).

More recently, with the introduction and use of developmental scales, particularly motor and language developmental scales, a different approach to assessing young exceptional children has evolved. In a sense, developmental

scales are a summary of observed behaviors at different age levels. Their main value lies in the ease of administration during a period of the child's life when other assessment devices may be unusable. For instance, standardized tests of psychological measurement require some cooperation and sophistication on the part of the child--something that the mentally retarded child may not be able to give. In addition, attempts at testing using traditional procedures are often frustrating in that the child is often unable to follow instruction or respond according to the formal structure of the test. Typically, these children are often unable to adequately perform the various tasks required in standard psychological testing such as sorting shapes, stacking blocks, or drawing a picture of a man. In addition to this low level of competence, the problems of hyperactivity and distractability interfere with the usual requirements of psychological test administration (Gardner & Giampa, 1971). In this case, developmental scales may be the best devices available.

Some of the presently used developmental scales are very specific and restricted to the assessment of a simple skill. Examples are auditory letter recognition tests or the diagnostic reading tests. Others are more global, assessing a wider range of developmental areas. Examples of the latter group include the Denver Developmental Screening Test (Frankenburg, Dodds, & Fandal, 1970), an instrument designed for the early detection of mental retardation in infant and preschool developmental periods. Although the Denver Developmental Screening Test is relatively widely used and can be administered by paraprofessionals in a 20-minute session, the test is used primarily to identify preschool children who are mildly or moderately impaired. Data from a validation study by Frankenburg et al. (1971) support the use of the Denver with children in the higher IQ range.

The development of the Post-Entry Preschool Scales represents an extension of the Post-Entry Monitoring Instrument to the lower age group. After a year and a half of intensive field testing, it was found that the Post-Entry Monitoring Instrument is discriminate down to the age of approximately eight. Younger children, on the other hand, frequently were not even able to perform Level I behaviors across the various subscales. In addition, the behavioral increments contained in the ascending order of item difficulty within a given subscale are often too large for children who are still in early stages of development. For example, the progression from crawling to walking represents a major developmental milestone, the accomplishment of which requires a period of six months in normal children. In addition, a number of items at the higher levels, especially Level IV and V, were inappropriate in content for young children. Skills such as budgeting one's income or applying for a job are meaningless for the preschool age child.

The main objective in the devleopment of the Preschool Scales, then, was to adopt the format, the standardized system of cues and specified criterion performances for a criterion-referenced instrument which would not only be discriminate at the lower ages, but hwich would also provide items appropriate in content and accompanying materials for children from birth to eight years of age.

Development

The item content areas for the Preschool Scales were the same as the subscales of the Post-Entry for persons above eight years of age. As the Part B version, the items were to be divided into the following developmental areas: motor development, self-help, academic/cognitive, language and socialization. Since the development of the Preschool Scales commenced relatively late during

the third project year, it was decided that rather than subjecting a pool of experimental items to the usual rating procedure, to construct the item hierarchy strictly from a developmental emphasis of existing scales. This was possible in the case of the Preschool Scales since the skills measured on this instrument describe developmental progress and are developmental milestones until the child reaches a considerable degree of competence and self-sufficiency in a given skill area.

Each level on the Preschool Scales represent a chronological year. For example, a Level I item deals with skills that are typically acquired during the first year of life in normally developing children. Level II essentially corresponds to second year achievements, and so on. Finally, Level V contains behaviors that usually develop at the age of 49 months and up. Table 10 lists the 125 items of the Preschool Scales by level and by subscale. In addition, the table indicates the age equivalencies in months at which these skills are typically acquired. To support the validity of the developmental sequence of the Preschool Scales, the items and their corresponding age equivalencies have been compared to five other instruments which represent developmental scales frequently used in the assessment of exceptional children.

Format

Like the Part B of the Post-Entry Monitoring Instrument, the Preschool Scales rely on the observational assessment method in a criterion-referenced approach to measurement, with emphasis on identifying individual performance levels relative to a prespecified criterion. Since the item format, administration and scoring system are identical to those of the Part B form, the administration and scoring system of the Post-Entry Monitoring Instrument Part A & B is the same.

Table 10

AGE EQUIVALENCIES FOR ATTAINMENT
OF DEVELOPMENTAL ACCOMPLISHMENTSPOST-ENTRY MONITORING INSTRUMENT
PRESCHOOL FORM

MOTOR DEVELOPMENT

ITEM	BAYLEY	DENVER	ALPERN- BOLL	GESELL	LEARNING ACCOMPLISH- MENT PROFILE
<u>LEVEL I</u> (0-12 Months)					
1. Reaching for the object	1-5 mo.	3-5 mo.	1-6 mo.		2-4 mo.
2. Rolling over	2-5 mo.	3-4 mo.	1-6 mo.		3 mo.
3. Pulling self to stand	5-12 mo.	6-9 mo.	7-12 mo.		8 mo.
4. Pushing the ball forward	8-15 mo.				
5. Banging the spoon	4-8 mo.				8 mo.
<u>LEVEL II</u> (13-24 Months)					
1. Picking up a cube	4-8 mo.	5-7 mo.	1-6 mo.		5 mo.
2. Sitting without support	5-9 mo.	5-6 mo.	7-12 mo.		5 mo.
3. Crawling	1-3 mo.		1-6 mo.		1 mo.
4. Rolling the ball		10-13 mo.			15 mo.
5. Grasping with thumb and fore- finger	7-12 mo.	7-10 mo.	7-12 mo.		10 mo.
<u>LEVEL III</u> (25-36 Months)					
1. Making marks with a pencil	4-10 mo.	12-17 mo.	13-18 mo.	15 mo.	12 mo.
2. Getting down from adult chair			23-30 mo.		21 mo.
3. Walking alone	9-17 mo.	11-13 mo.	13-18 mo.		12 mo.
4. Throwing the ball		16-23 mo.	19-24 mo.	36 mo.	15 mo.
5. Building a tower with cubes	13-21 mo.	14-18 mo.			15-18 mo.
<u>LEVEL IV</u> (37-48 Months)					
1. Turning pages of a book	8-18 mo.				18-23 mo.
2. Stand on one foot	13-30 mo.	3-4 mo.	25-31 mo.		36 mo.
3. Running					36-48 mo.
4. Throwing ball at target			55-66 mo.	42 mo.	36-48 mo.
5. Rolling clay					24-29 mo.
<u>LEVEL V</u> (49 + Months)					
1. Picking up thread		10-12 mo.			
2. Hopping on one foot	30+ mo.	39-51 mo.		54 mo.	36-48 mo.
3. Skipping feet alternately			55-66 mo.	48 mo.	60-72 mo.
4. Catching the bounced ball		45-57 mo.	43-54 mo.	48 mo.	36-48 mo.
5. Putting pegs in holes	10-17 mo.				

Table 10
(continued)

SELF-HELP/INDEPENDENT LIVING

ITEM	BAYLEY	DENVER	ALPERN-BOLL	GESELL	LEARNING ACCOMPLISHMENT PROFILE
<u>LEVEL I</u> (0-12 Months)					
1. Retaining semi-solid food		14-20 mo.	13-18 mo.		18 mo.
2. Drinking from a cup when held		10-12 mo.	7-12 mo.		11 mo.
3. Taking off clothes		14-18 mo.	13-18 mo.		12-24 mo.
4. Acknowledging running nose					
5. Maintaining dry pants/diapers			37-42 mo.		
<u>LEVEL II</u> (13-24 Months)					
1. Finger feeding self		5-7 mo.			12 mo.
2. Drinking from a cup alone without spilling		10-12 mo.	13-18 mo.		17 mo.
3. Pulling off socks		14-18 mo.	13-18 mo.		12-24 mo.
4. Blowing nose on request					
5. Having bowel control		37-42 mo.			15 mo.
<u>LEVEL III</u> (25-36 Months)					
1. Eating with a spoon		14-20 mo.	13-18 mo.		36-48 mo.
2. Drinking from a soft drink can/bottle			13-18 mo.		
3. Putting on simple garments		21-30 mo.	31-36 mo.		24 mo.
4. Washing hands and face		20-30 mo.	37-42 mo.		36-48 mo.
5. Verbalizing toilet needs consistently			25-30 mo.		24 mo.
<u>LEVEL IV</u> (37-48 Months)					
1. Eating with a fork			19-24 mo.		36-48 mo.
2. Getting a drink unassisted					24-36 mo.
3. Buttoning		33-42 mo.	43-54 mo.		40 mo.
4. Taking bath			79-90 mo.		33 mo.
5. Using bathroom without assistance			37-42 mo.		45 mo.
<u>LEVEL V</u> (49 + Months)					
1. Cutting with a knife			66-78 mo.		46-60 mo.
2. Pouring well from pitcher					36-48 mo.
3. Tying shoe laces					72 mo.
4. Asking location of bathroom in unfamiliar environment					

Table 10
(continued)

ACADEMIC/COGNITIVE

ITEM	BAYLEY	DENVER	ALPERN-ROLL	GESELL	LEARNING ACCOMPLISHMENT PROFILE
<u>LEVEL I</u> (0-12 Months)					
1. Reacting to sight of toy	1-2 mo.	1-2 mo.	1-6 mo.		4 mo.
2. Turning head to look for dropping object	4-8 mo.		7-12 mo.		5 mo.
3. Uncovering toy	6-12 mo.				8 mo.
4. Playing "Pat-a-Cake"	7-15 mo.				9 mo.
5. Responding to "no-no"	7-17 mo.				10 mo.
<u>LEVEL II</u> (13-24 Months)					
1. Looking at pictures	7-16 mo.				10 mo.
2. Responding to own name in group situation					9 mo.
3. Squeezing a squeak toy					11 mo.
4. Looking for toys in correct place					22 mo.
5. Discriminating objects	16-30 +				
<u>LEVEL III</u> (25-36 Months)					
1. Naming picture cards	14-27 mo.	17-21 mo.	18-36 mo.	18-36 mo.	24 mo.
2. Responding correctly to requests			13-18 mo.		24 mo.
3. Recognizing self when shown snap shots			19-24 mo.		33 mo.
4. Listening to music			25-30 mo.		30-35 mo.
5. Knowing own sex					36 mo.
<u>LEVEL IV</u> (37-48 Months)					
1. Naming primary colors		36-54 mo.	25-30 mo.	4-5 mo.	36-48 mo.
2. Identifying basic shapes			25-30 mo.		
3. Counting four blocks			37-42 mo.		
4. Saying alphabet by rote					36-48 mo.
5. Completing seven piece puzzle					
<u>LEVEL V</u> (49 + Months)					
1. Recognizing simple foods			19-24 mo.		60-72 mo.
2. Giving home address					48-60 mo.
3. Giving age and birthday			43-54 mo.		42 mo.
4. Giving functional answers				36-72 mo.	
5. Understanding numbers			67-78 mo.		

Table 10
(continued)

LANGUAGE

ITEM	BAYLEY	DENVER	ALPERN-BOLL	GESELL	LEARNING ACCOMPLISHMENT PROFILE
<u>LEVEL I</u> (0-12 Months)					
1. Responding to sound of rattle	0-1 mo.	1-2 mo.	1-6 mo.		1 mo.
2. Making single vowel sounds	1-6 mo.				2 mo.
3. Babbling	3-8 mo.	1-5 mo.	1-6 mo.		4 mo.
4. Saying "ma-ma" or "da-da"	5-14 mo.	9-12 mo.	7-12 mo.		7 mo.
5. Clapping hands upon verbal request					6-12 mo.
<u>LEVEL II</u> (13-24 Months)					
1. Responding to own name			7-12 mo.		12 mo.
2. Following simple commands	6-14 mo.	16-23 mo.			15 mo.
3. Pointing to one named body part		15-19 mo.	13-18 mo.	18 mo.	17 mo.
4. Naming one object	13-27 mo.		13-18 mo.	18 mo.	18 mo.
5. Asking for wants by holding object			13-18 mo.		18 mo.
<u>LEVEL III</u> (25-36 Months)					
1. Referring to self by name			19-24 mo.	12-18 mo.	13-24 mo.
2. Pointing to five body parts of self or doll				24 mo.	22 mo.
3. Asking for food when hungry		36-54 mo.			23 mo.
4. Uses pronouns (I, me)			19-24 mo.		24 mo.
5. Using three-word sentences			19-24 mo.		24 mo.
<u>LEVEL IV</u> (37-48 Months)					
1. Naming common objects	13-27 mo.	15-22 mo.	13-18 mo.	18 mo.	27 mo.
2. Understanding the prepositions	22-36 mo. +	33-51 mo.		36-54 mo.	30-35 mo.
3. Following two-stage commands			13-18 mo.	18-24 mo.	30-36 mo.
4. Telling action in pictures			36-72 mo.		36-48 mo.
5. Verbalizing opposites		36-51 mo.		42-48 mo.	38 mo.
<u>LEVEL V</u> (48 + Months)					
1. Reciting three nursery rhymes			31-36 mo.		36-48 mo.
2. Repeating three digits			25-30 mo.	42 mo.	36-48 mo.
3. Asking questions					36-48 mo.
4. Defining four words in terms of use		42-54 mo.			48-60 mo.
5. Knowing the meaning of two abstract words					

Table 10
(continued)

SOCIALIZATION

ITEM	BAYLEY	DENVER	ALPERN-ROLL	GESELL	LEARNING ACCOMPLISHMENT PROFILE
LEVEL I (0-12 Months)					
1. Smiling spontaneously	1-5 mo.	2-4 mo.	1-6 mo.		3 mo.
2. Laughing aloud		1-3 mo.	1-6 mo.		4 mo.
3. Discriminating strangers	3-8 mo.	6-8 mo.	1-6 mo.		5 mo.
4. Playing "peek-a-boo"		6-8 mo.			6 mo.
5. Reaching for familiar person					12-24 mo.
LEVEL II (13-24 Months)					
1. Playing with other children			12-24 mo.		18 mo.
2. Demanding personal attention			19-24 mo.		18-24 mo.
3. Initiating simple actions					18-23 mo.
4. Responding to affection					
5. Initiating own play activities			12-18 mo.		24 mo.
LEVEL III (25-36 Months)					
1. Playing simple group games		21-30 mo.	31-36 mo.		30-35 mo.
2. Listening to stories					36-48 mo.
3. Helping to put things away		16-20 mo.	25-30 mo.		30 mo.
4. Helping with adult activities					36-48 mo.
5. Understanding the need to take turns			31-36 mo.		36-48 mo.
LEVEL IV (37-48 Months)					
1. Playing competitive exercise games		21-30 mo.	37-42 mo.		48-60 mo.
2. Showing affection for younger siblings					36-48 mo.
3. Performing for others					44 mo.
4. Going on errands outside the house					
5. Understanding sharing					31-36 mo.
LEVEL V (49 + Months)					
1. Playing simple table games				67-78 mo.	60-74 mo.
2. Choosing new friends			19-24 mo.		60-74 mo.
3. Getting along well in small groups					60-74 mo.
4. Exploring neighborhood				67-78 mo.	60-74 mo.
5. Understanding the need for fair play					60-74 mo.

Sample

The sample consisted of 39 mentally retarded children. Thirty-four of these children were drawn from the SEVTC resident population while the remaining five attend an experimental preschool class. The children ranged in chronological age from five to fifteen with a mean of 10.28 for the SEVTC population and a mean of 4.80 for the BEH children. The corresponding developmental ages ranged from one year to eleven years and three months with a mean of 3.18 for the SEVTC children and a mean of 2.44 for the BEH children. These developmental ages were derived from the Stanford-Binet test scores. Table 11 summarizes the characteristics of the sample.

Table 11
Characteristics of the Sample

Group	N	Sex		CA		MA	
		M	F	Mean	Range	Mean	Range
SEVTC Children	34	23	11	10.28	5-15	3.18	1 Yr., 11 Yrs., 3 Months
BEH Children	5	2	3	4.80	4-5	2.44	1 Yr., 6 Months, 4 Yrs.

Reliability

The first field test to establish interobserver reliability was conducted from 6/6/77 to 6/17/77. The SEVTC children were assessed in their respective cottages and cottage staff provide the information for the interview based items. Project staff scheduled the appointments for the other children at the home of the parent who would respond to the interview type items at the end of the behavioral observations. The results from this first reliability testing are summarized in Table 12 in the form of a correlation matrix. As can be

seen from this table, the correlations range from .94 to .98.

Table 12

Preschool Scales
Inter-Observer Reliability
(N = 37 Pairs of Observations)

Observer 2	Observer 1					
	Total Score	Motor Development	Self-Help	Academic/Cognitive	Language	Socialization
Total Score	.98					
Motor Development		.97				
Self-Help			.98			
Academic/Cognitive				.97		
Language					.96	
Socialization						.94

As a group, behavioral characteristics of the sample population may be described in terms of means. As in the Part B version of the Post-Entry Monitoring Instrument, the highest possible total score is 400. Table 25 presents the means and standard deviations obtained by the sample population as well as indicating the standard error of measurement for each subscale.

Table 13

Means, Standard Deviations & Standard Errors
of Measurement Obtained by the
Sample Population on the Preschool Scales

	Total Score	Motor De- velopment	Self- Help	Academic/ Cognitive	Language	Sociali- zation
Mean	215.78	51.37	32.48	38.86	31.91	46.18
Standard Deviation	141.48	31.16	37.00	27.86	28.91	30.93
Standard Error of Measure- ment	14.15	5.39	5.23	4.78	4.99	5.25

A second field test was conducted one week after the initial field test to establish test-retest reliability. The correlation matrix presented in Table 14 depicts the various test-retest coefficients for the various subscales.

Table 14

Preschool Scales
Test - Retest Reliability
(N = 31)

Observa- tion 2	Observation 1					
	Total Score	Motor De- velopment	Self- Help	Academic/ Cognitive	Language	Sociali- zation
Total Score	.97					
Motor De- velopment		.99				
Self-Help			.98			
Academic/ Cognitive				.98		
Language					.98	
Sociali- zation						.98

A graph depicting three different sets of assessment data (Observer 1, Observer 2 and Observer 1 testing for test-retest reliability) is shown in Figure 4.

Overall, the Part A scale of the Post-Entry has demonstrated high consistency of scores. However, it should be noted that the reliability results are derived from a relatively small sample. It is therefore necessary to administer these Scales to a larger population of preschool children to replicate the reliability coefficients obtained during the pilot testing.

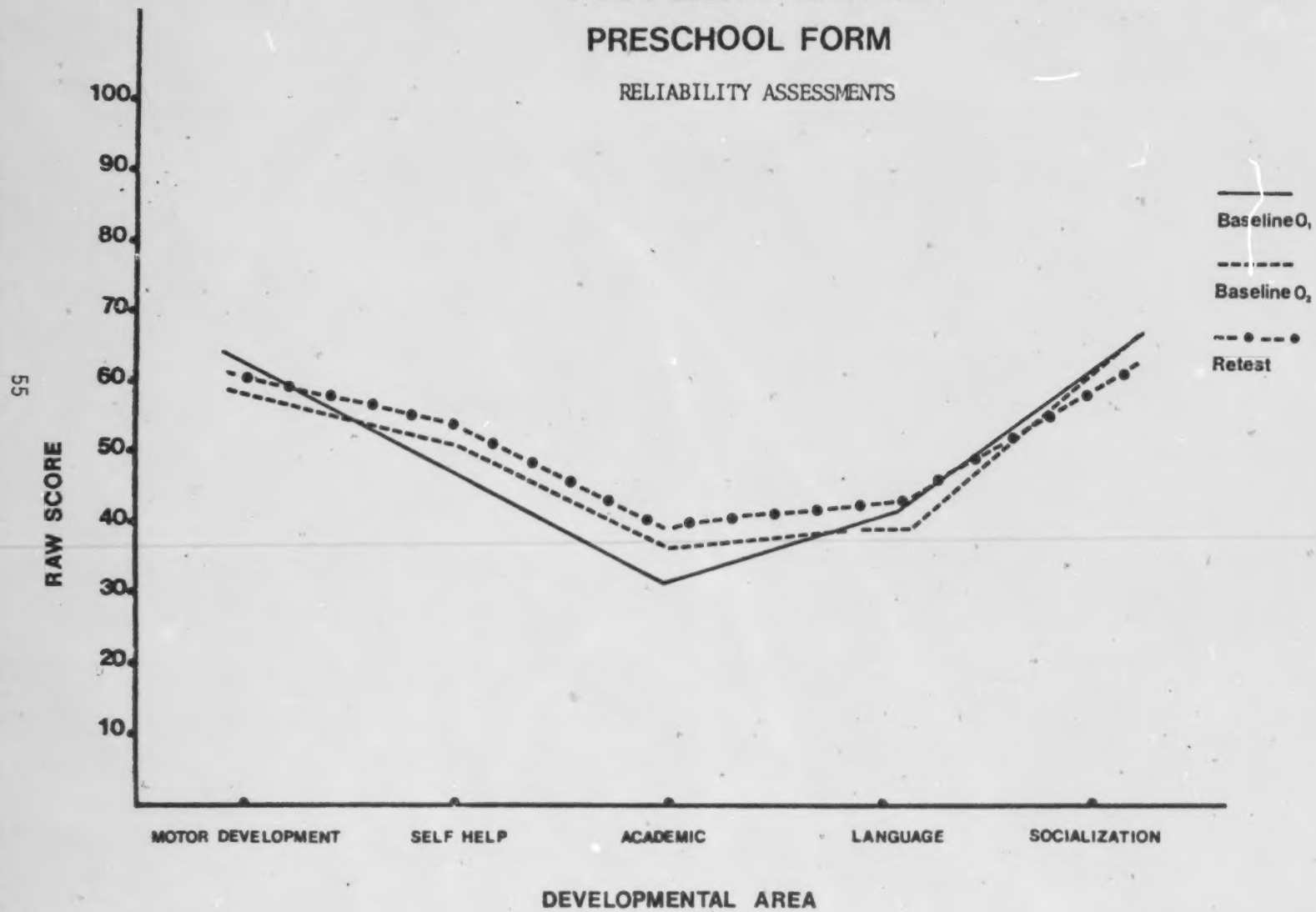
Validity

The Vineland Social Maturity Scale (VSMS) (Doll, 1947) was chosen as the comparative measure because this scale examines the behavioral competencies in skill areas relevant to the subscales of the Preschool Scales. The major areas assessed by the VSMS include self-help, locomotion, occupation, communication, self-direction and socialization. In addition, the Social Maturity Scale provides an outline of detailed performances in respect to which children who a progressive capacity for looking after themselves and for participating in those activities which lead toward ultimate independence as adults (Doll, 1965). As in the case of the Preschool Scales, (Part A) the items of the VSMS are arranged in order of increasing average difficulty and represent progressive maturation. For Doll, this maturation in social dependence is taken as a measure of progressive development in social competence. The VSMS thus emphasizes social development across the different skill areas being assessed. The items on the Preschool Scales, on the other hand, are conceived as representing a general growth in a given behavior domain such as motor development or language. This growth is expressed in some detailed performance as an overt indication of progress.

Figure 4

POST-ENTRY PROFILE PRESCHOOL FORM

RELIABILITY ASSESSMENTS



For validation purposes, the total scores from the VSMS and the total scores derived from the Preschool Scales were compared by computing a rank order correlation between the two sets of data. The resulting coefficient was $r = .96$ which represents the formative index of validation of the Preschool Scales. Table 15 presents the raw data and ranks for both scales.

Table 15
Preschool Scales - Validation
(N = 35)

Child	VSMS Total Score	Rank	Preschool Scales Total	Rank
1	48	21	212	19
2	73	29	321	25
3	25	11	71	8
4	31	16	172	16.5
.				
.				
.				
.				
35	16	4	44	4
$r = .96$				

Implications

Although the Preschool Scales are presently in experimental form, their high formative reliability and validity encourage further research with this instrument as well as implementing the instrument in applied settings. The usefulness of the Preschool Scales for practical purposes is due to the fact that this instrument affords a standard schedule of normal development which can be used repeatedly for measuring the acquisition of new behavior or more generally assessing behavioral changes. The Preschool Scales also offers assistance in the training of developmentally disabled children as well as provided a schedule for reviewing the developmental histories of handicapped children.

In terms of continued research, it would be valuable to replicate the reliability studies with a large scale data. The validity of the Preschool Scales can be greatly enhanced by collecting additional data based on comparisons with other developmental scales. In addition, it is advisable that practical criteria such as a child's progress in a classroom for handicapped children or teacher evaluations are employed to establish predictive and criterion related validity of the newly developed instrument.

Finally, the implementation of the Preschool Scales in the testing within training paradigm discussed in the preceding section is expected to yield some highly practical results relevant to program planning.

In summary, the Preschool Scales may be used with mentally retarded children from birth to an age of eight. The Scales provide a means of collecting initial baseline data as well as providing a monitoring system to assess performance and evaluate the program plan.

Chapter VI

POST-ENTRY MONITORING INSTRUMENT

Part B: Eight Years Through Adulthood

Introduction

Once the transfer from the sending facility to a training environment has been accomplished, the first phase of the three-phase community integration model has been completed. The individual now finds himself in an environment which emphasizes a more systematic exposure to training in accordance with entry skill levels. As community integration becomes a major priority in mental retardation, a detailed instrument is needed which allows not only the gathering of reliable information regarding the individual's observed level of functioning, but which also makes provisions for monitoring behavioral changes resulting from programmatic intervention. It is at this intermediate stage of the community integration process that the individual acquires the fundamental skills necessary for successful adjustment to less restrictive living alternatives. The dual process of continuous assessment and intermittent monitoring serves the dual function of correcting skill deficits while at the same time modifying program prescriptions.

Thus, the primary objective at the post-entry level was to develop and validate an observation-based instrument sensitive enough to measure relatively small behavioral changes. The accomplishment of this objective required the development of an instrument which would encompass a wide range of behaviors. While the Pre-Entry Screening Instrument was intended as a screening device with major emphasis on basic motor, self-help, and communication skills, the emphasis at the post-entry level shifts to more specific behaviors over a wider range of performance areas, including social, academic/cognitive, and language competence.

In addition to the considerable expansion of the number of behaviors to be observed, the method by which the assessment information was collected changes in transition from the pre- to post-entry scales, i.e. from the interview method to direct observation. For pre-entry screening, the interview method was most efficient in terms of time and minimal interference with the sending environment. However with individuals in a more intense training situation it became essential that a reliable assessment procedure be developed for evaluating the acquisition of a complex behavioral repertoire and for monitoring behavioral changes resulting from the systematic training programs. Direct observation of the individual was considered the most reliable way to obtain the record of behavior necessary for level of program decision-making.

Typically, behavior subjected to observation tends to be naturally instigated, and the individuals assessed are observed for longer periods of time in varied circumstances. Observational studies, almost by definition, are more concerned with public, visible, external events and less so with covert processes. At the intermediate stage of community integration, the observational method seemed particularly appropriate because data collected this way are usually recorded in molar units and are, therefore, directly transferable to practical situations (Baumrind, 1964). Thus the Post-Entry Monitoring Instrument uses the observational method in a criterion-referenced approach to measurement, to identify individual performance levels relative to a prespecified criterion.

Development

The first step in the developmental sequence of constructing the Post-Entry Monitoring Instrument was to compile a preliminary item-pool representing the various competencies. A set of more than 300 developmental training programs

being validated at SEVTC supplied the basic working definitions for the items. Using the terminal behaviors from training programs as the general competency statement, criterion item-statements were generated to define each behavior operationally as "the resident does" (followed by an action verb phrase such as "reaches for the object") to provide the observable characteristics of the skill being assessed. The writing of the criterion-referenced test items was guided by the rule of making sure the item accurately represented the criterion behavior. Specifically, the domain of relevant test responses needed to be defined, and the circumstances under which they should be observed had to be delineated. As Popham and Husek (1969) stated, whether items are meant to be difficult or easy, discriminating or nondiscriminating, the important requirement is to make the item represent the class of behaviors outlined by the criterion.

In writing the test items, the following objectives were considered desirable for all items. (1) The classes of behaviors that define different performance levels should be specified as clearly as possible. (2) Each behavior class should be defined by a set of situations in which the behaviors can be displayed in terms of graded variations. (3) The obtained score must be capable of expressing the individual's performance characteristics objectively and meaningfully in the classes of behavior. Since certain terminal outcomes such as the attainment of a specific level of functioning were desired and a training sequence had to be derived from the assessment, it was necessary to have items which had training program correspondence at each point until the terminal competence had been demonstrated.

After the original item-pool derived from SEVTC training programs had been compiled, the items were grouped into six behavioral categories representing six developmental areas which in turn make up the subscales of the

Post-Entry Instrument: motor development, self-help, independent living, academic, language, and socialization. These developmental areas provided the organizational system for arranging items into separate subscales.

In addition to being categorized into developmental areas, items were also arranged in hierarchical order ranging from Level I, representing characteristic behaviors of the minimally functioning individual, to Level VIII, which is characteristic of more independently functioning persons.

In order to provide a meaningful framework for the eight-level hierarchy, each level was tentatively equated with a different degree of community-living independence. Table 16 defines the eight levels scaled to living alternatives of increasing complexity.

After the items had been categorized into subscales across the six developmental areas with five levels of functioning within a given area, a group of six professionals in the field of mental retardation, which included special educators and psychologists were asked to rate the adequacy of each item in terms of its relevance to a given developmental area and its importance for a specifically defined level of independence. The raters were aware of the Project's objectives but were not directly involved.

In order to facilitate the rater's task in making his judgements, the following materials were provided: (a) a list of criterion behaviors for each of the six developmental areas which were considered as potential items and (b) a description of each level of the eight-level hierarchy. Using the area of motor development as an example, Table 17 is presented to illustrate the procedure employed in rating the items.

As Table 17 indicates, the criterion behaviors were deliberately listed in random order to avoid implications of an underlying ordinal sequence. From the list of criterion behaviors provided for each area, the raters selected

TABLE 16

Equating Levels of Functioning with Potential Living
Alternatives Open to Individuals with Mental Retardation Problems

LEVEL	LIVING ALTERNATIVES
I	Requires continuous care and medical support; often non-ambulatory.
II	Institutionalized; takes care of some basic needs with assistance (for example, self-help skills such as eating, dressing, toilet training); dependent upon supervision for daily activities; benefits from specialized one-to-one and group training programs.
III	Takes care of all his personal needs independently; moves about residential facility or house without assistance; functions in group-teaching activities and profits from prevocational training programs.
IV	Lives in training center facility, can possibly work in a sheltered workshop; is generally dependent upon continuing supervision and quasi-sheltered living.
V	Lives in highly structured group home with programs for continuing development of social and academic skills; functions in special employment settings such as sheltered workshops; needs supervision in management of his personal affairs (money, work schedule, transportation); if child can, attends special classes in public schools.
VI	Lives in group home; employed in special employment setting; receives salary and on-the-job training; functions independently; needs continuing support and supervision in management of personal affairs; if child can, attends special classes.
VII	Lives in group home; employed in community; receives salary and on-the-job training; needs less support in management of social affairs; if child can, attends public school in remedial class.
VIII	Lives in satellite apartment or own house, employed in community; capable of effective social and economic functioning in "normal environment", if child can, attends regular classroom in public schools.

TABLE 17

Example of Rating Procedure from the Motor Development Subscale

Stands for 5 minutes with assistance
Rolls ball 2 feet from sitting position
Sits for 5 minutes without assistance
Reaches toward object
Grasps object within reach
Throws ball forward hitting target on wall
Stands on heels 5 seconds without assistance
Walks between balance beams
Walks up/down stairs, feet alternating
Imitates arm movements
Imitates arm movements in water
Puts shapes into multi-shape box
Skips 10 feet
Bats ball 5 out of 7 times
Walks over balance beams
Jumps over small obstacle
Completes 10-piece puzzle
Runs 25 feet
Swims 2 laps using front and back stroke
Uses handtools (screwdriver, wrench, saw)
Paints picture with numbers up to 50
Assembles wood or plastic kits

LIVING ALTERNATIVE	MOTOR DEVELOPMENT	
	Behavior	Rating
Level I Requires continuous care and medical support; often non-ambulatory.	Rolls ball.	4.5
	Paints picture w/ # up to 50.	1.0
Level II Institutionalized, takes care of basic needs with assistance (self-help skills: eating, dressing, toilet trained), dependent upon supervision for daily activities; maintains interpersonal relationships with staff and residents; benefits from specialized one-to-one and group training programs.		

items according to appropriate levels. See Table 16.

A five point scale was used (1 = very unimportant, 2 = unimportant, 3 = neutral, 4 = important, 5 = very important). In addition, each rater was asked to add behaviors which were not listed originally, but which he believed to be critical prerequisites for a given level. Table 17 provides an example of the actual rating.

Analysis of Item Ratings

Upon receipt of all the ratings, actual assignment of items into appropriate levels proceeded as follows: target behavior ratings were combined for raters ($n = 6$); and, means, standard deviations, and ranks were computed for each target behavior. Those behaviors which had the highest means, lowest standard deviations, and almost identical ranks across raters were chosen as subscale items to represent a given developmental area at a specified level. Table 18 provides an example of ratings taken from Motor Development, Level I.

TABLE 18
Example of Behavioral Ratings
Returned by the Group of Independent Raters
($n = 6$)

Level 1						
Behavior	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆
1. Stands for 5 minutes with assistance	5	5	4	3	4	5
2. Rolls ball 2 feet from sitting position	4		3	3	2	4
3. Sits for 5 minutes without assistance	5	5	4	3	4	
4. Reaches toward object	5	5	4	4		5
5. Imitates arm movements	5		4	4		
6. Stands on heels without assistance			4	3		4
7. Imitates arm movements in water				2		

Based on these ratings and the subsequent analysis, items 1, 3, 4 and 5 met the statistical criterion and consequently appear on the Post-Entry Monitoring Instrument as Level I, Motor Development items.

The rating procedure resulted in a number of findings. First of all, a number of inappropriate and ambiguous items were eliminated, thereby reducing the scope of later, more costly revisions. Secondly, it was obvious that some major modifications in developmental areas, as well as in the number of levels, were necessary. The goal in item selection was to cover a wide range of behaviors representative of a given developmental area, while at the same time, maintaining a manageable number of categories. In order to produce a balanced instrument for assessing critical skills in each developmental area, it was desirable to include an equal number of items (five) in each content area and at each level. However, based on the returned ratings, this was impossible. For example, in the area of Self-Help there were no items representing Levels VI, VII and VIII. Similarly, in the area of Independent Living the lower levels (I and II) were not represented. In order to maintain a rational hierarchy, these two areas were collapsed into one developmental area (Self-Help/Independent Living), in which self-help skills such as eating, dressing and toileting occupy the lower levels (I - III) gradually leading into independent living skills such as preparing meals or telling the time (Levels IV and V).

The third major modification involved a reduction of the number of levels, since there was no agreement among the independent raters as to what the differentiating characteristics and prerequisites at Levels VI, VII and VIII would be. Table 19, taken from the Independent Living subscale, provides an example of this lack of agreement. As a result of this procedure, a five-level scale was adopted. This also resulted in the developmental progression from level to level being more clearly defined.

TABLE 19

Example of Behavioral Ratings Demonstrating
Independent Living Items

Level VI

Behavior	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆
1. Cooks with recipe and assistance	4			4		
2. Uses non-fare means of transportation	5					4
3. Locates phone number in phone book	4					
4. Uses timeclock for scheduled activities	5		3		5	3
5. Attends scheduled leisure activities	5	3				
6. Writes 5-word sentence	5		4	4		
7. Fills in biographical information independently	5	4		5		
8. Solves simple problems with divisions and fractions.	5					
9. Completes simple description of daily activities	3					
10. Washes and dries clothes and returns them to storage		4			4	
11. Shops at appropriate stores for clothing, groceries, hardware, etc.		4		5		
12. Uses fire extinguisher		3			5	
13. Uses services of police and fire department		3			5	
14. Follows recipes independently		3	4			5
15. Prepares meals independently		5			5	

Following analysis of the ratings and appropriate modification of the items, an experimental draft of the instrument was assembled. It consisted of five subscales in the following behavioral categories: motor development, self-help/independent living, academic, language, and socialization. Each subscale is divided into five levels with five items each, for a total of 125 items.

Format

The item format was designed so that each item appears as a behavioral objective, e.g. "Puts shapes into multi-shape box". The item itself is followed by a descriptive paragraph containing the specific conditions under

which the observations are to be made and a clearly specified criteria to guide the observer in making behavior decisions. In addition to standardizing the conditions under which the behaviors are to be observed, the cues to be used to elicit the behavior have also been standardized. It was anticipated that, by providing this set of standardized guidelines, reliability would be greatly increased.

Criterion behaviors can be observed under one of the following stimulus conditions:

- SI - self-initiated; i.e. the individual independently performs the skill without being cued.
- VC - verbal cue which is specified for each item where appropriate.
- MC - modeling cue; i.e. the observer models and performs the desired behavior. Modeling cues are always followed by a repetition of the verbal cue.
- PC - physical cue; i.e. the observer initiates the behavior using physical guidance. Again, the physical cue is always followed by a repetition of the verbal cue. This type of prompting is often referred to as graduated guidance training (Azrin and Foxx, 1971).
- N - no response; i.e. the person fails to make an observable response, even after the behavior has been initiated for him.

As the individual progresses to higher levels of functioning, the modeling and physical cues are faded out gradually. By the time Level IV is reached physical cues are no longer used to elicit a given behavior. The rationale behind this is that the higher levels of functioning indicate greater readiness for community living, which generally requires responsiveness to verbal or visual cues without physical prompting. Although modeling and physical cueing are an integral part of a training environment, they usually are not given outside of a training context where the individual is expected to perform on his own. Therefore, at Level V, the responses are recorded as "all or none" behaviors. By the time Level V behaviors have

been acquired, the individual should be well on his way to a community setting.

Although the Post-Entry Monitoring Instrument relies primarily on direct observation of the individual being assessed and, therefore, requires his active participation in the assessment process. However, there are some items which can only be assessed on the basis of indirect reports gathered from a person who has worked with this individual for some length of time. This is necessary for items such as "assumes responsibility" for which it is difficult to stage an event which could be directly and immediately observed and would be a valid response. A copy of the Post-Entry Monitoring Instrument is provided as Attachment II.

Scoring

The observed responses are recorded and scored directly on each test page. For an initial or baseline assessment, observation commences with Item 1, Level I. Depending upon the level at which the resident performs the behavior (self-initiated; with verbal, modeling or physical cues), the observer blackens the appropriate circle under the item to indicate the performance level, based on the type of cue required to elicit the criterion behavior. The score associated with each performance level appears directly below the circle.

To arrive at the total score for a given level, the scores corresponding to each circle checked are added, and the total number is entered in the box labeled "Level Score" at the bottom of each level. Finally, by adding all the scores obtained for each individual level, a total score is computed for the total skill competency in that area. The total scores for each developmental area are recorded on all Level V pages of the textbook and may be plotted on a graph which will yield the individual's Post-Entry Profile. A sample of the profile appears on page 75.

The scores derived from the Post-Entry Monitoring Instrument are intended to be interpreted in a flexible, pragmatic manner rather than in terms of an abstract number. For example, an individual obtaining a score of 45 on the Motor Development subscale is best described in terms of the motor skills he has mastered (e.g. he can sit, stand, walk and jump) and next higher level of functioning (e.g. programs teaching the individual to run, climb, catch a ball, etc.). The interpretation of a given score follows a dichotomized statement in terms of mastery and deficit skills. In general, scores are not intended to be reported for their numerical value but should always be interpreted in the context of skills already acquired and skills which need to be developed.

Sample

The Post-Entry Monitoring Instrument was developed and validated on the resident population of Southeastern Virginia Training Center for the Mentally Retarded, Chesapeake, Virginia. Table 20 describes the general characteristics of the sample. The number of residents who participated in the different field tests varied slightly because of new admissions, residents being on convalescent leave, field trips, special programs, etc.

Reliability

Classical psychometric theory usually approaches reliability in terms of parallel forms, internal consistency, and test-retest reliabilities as conceptually distinct indices of measurement precision. Users of observational data typically have been concerned with inter-observer agreement as the most relevant index of reliability which is conceptually close to parallel forms. Since the Post-Entry Monitoring Instrument combines the criterion-referenced approach to measurement with basic psychometric

TABLE 20

SEVTC Population Distribution

By SEX by AGE by LEVEL OF MENTAL RETARDATION according to
AAMD Classification by LENGTH OF TIME IN RESIDENCE expressed
as greater or less than six months [6M]

SEX	MR LEVEL	MILD			MODERATE			SEVERE			PROFOUND			By Age Total
	AGE	<6m	>6m	Σ	<6m	>6m	Σ	<6m	>6m	Σ	<6m	>6m	Σ	
M A L E	0- 6													1
	7-12							3	1	4	2	1	2	6
	13-21	1	3	4	2	5	7	3	7	10		3	3	24
	22-35					4	4		4	4		1	1	9
	36-45								1	1		1	1	2
	46-55					1	1		1	1				2
	56 +							1		1				1
SEX	total	1	3	4	2	10	12	7	14	21	2	6	8	45
F E M A L E	0- 6													1
	7-12								1	1		1	1	2
	13-21					3	3		4	4				7
	22-35				2	4	6	1	7	8				14
	36-45				1	2	3							3
	46-55							1		1				1
	56 +													
SEX	total				3	9	12	2	12	14	2	2	2	28
TOTAL by AGE by LEVEL	0- 6													2
	7-12							3	2	5	2	1	2	8
	13-21	1	3	4	2	8	10	3	11	14		3	3	31
	22-35				2	8	10	1	11	12		1	1	23
	36-45				1	2	3		1	1		1	1	5
	46-55					1	1	1	1	2				3
	56 +							1		1				1
	total	1	3	4	5	19	24	9	26	35	2	8	10	N = 73

prerequisites as established by classical test theory, three field tests were scheduled to determine three different indices of reliability: (1) an inter-observer coefficient, (2) a test-retest coefficient, and (3) a split-half coefficient. The most common empirical estimate of the integrity of observation-based data is certainly inter-observer reliability, which is based on the ability of two or more observers to record the same information while independently observing the same individual.

A preliminary field test with a small sample ($n=12$) was scheduled in December, 1975, (12/28 - 12/31) to try out the instrument. The results indicated a coefficient of .96 for a total score correlation between two observers. From this the summative reliability testing was planned.

Consequently, the first large field-test to establish inter-observer reliability was scheduled. It was conducted by Project staff in January, 1976, (1/22 - 1/28) with 73 SEVTC residents (Table 20). Six observers were trained in the administration of scoring of the Post-Entry Monitoring Instrument. This training included procedures for getting the resident to respond effectively, for applying the behavioral test statements correctly, for recording the responses of the resident as well as for evaluating those responses according to the instruction for the standardized use of the instrument. The observers were trained to an 80% accuracy before collecting their behavioral observations. To minimize recording bias, the observers selected were persons who normally worked in a different capacity at SEVTC and who had no involvement with the residents. Furthermore, to rule out error which might be introduced by actual changes in target individual or his environment, these dual observations were conducted independently on consecutive days. This method, rather than simultaneous observation, was chosen to provide information regarding the possible effects of the observer's personal characteristics and delivery

techniques, and deficiencies in item objectivity, as well as errors in recording observations. The results are presented in the form of a composite correlation matrix in Table 21.

TABLE 21
Inter-Observer Correlation Matrix
(n = 73 pairs of observations)

Observer 2	Observer 1					
	Total Score	Motor Develop.	Self-Help/ Inde. Living	Academic	Language	Socialization
Total Score	.933					
Motor Development		.969				
Self-Help/ Inde. Living			.989			
Academic				.995		
Language					.986	
Socialization						.982

The results of this first reliability study supported the hypothesis that standardization of the situational context, as well as rigid standardization of the various cues and performance criterion, contributed to the high inter-observer correlations.

In addition to yielding the inter-rater reliability coefficient, the data collected during the first field test were also utilized to describe the characteristics of the sample. Table 22 presents the mean scores across the five subscales as well as the mean total score. In addition, standard deviations and the standard errors of measurement are tabulated. In interpreting these values in terms of making inferences about the overall level of functioning of the Training Center population that participated in this field test, it should be noted that the highest possible score in a given skill area is 100, and the highest possible total score is 400.

TABLE 22

Means, Standard Deviations and Standard
Errors of Measurement of the SEVTC Population
on the Post-Entry Monitoring Instrument
(N = 73)

	Total Score	Motor Develop.	Self-Help/ Ind. Liv.	Academic/ Cognitive	Language	Sociali- zation
Mean	275.06	61.89	60.23	38.58	56.04	57.95
Standard Deviation	137.18	32.35	24.46	27.68	34.35	32.49
Standard Error of Measurement	11.47	5.69	2.56	1.95	4.06	4.35

Since the post-entry assessments are not only designed to measure the individual's level of functioning, but also to identify program-entry levels, the usefulness of the instrument as an assessment tool depends heavily on the reliability of scores. Therefore, it seemed desirable to determine additional indices of reliability, especially in view of the fact that observational recordings, like all other measurements, are subject to potential biases. The observer himself is one source of bias and should be regarded as an experimental factor which must not be confounded with experimental conditions (O'Leary and Kent, 1973). Two additional indices of reliability were computed. The first of these was a test-retest coefficient, which is simply the correlation between the scores obtained by the same person on two different administrations of the instrument. Retest reliability shows the extent to which scores can be generalized over different occasions; the higher the reliability, the less susceptible the scores are to random changes in the condition of the individual being assessed or in the assessment environment.

An important aspect of the retest coefficients concerns the length of

the time interval which is allowed to elapse between the two assessment dates. It has generally been found that retest coefficients decrease progressively as the interval lengthens (Anastasi, 1976). It also has been recommended that, when testing young children and individuals with mental retardation who mental ages are similar to those of normal children, the interval should be shorter than for older or normal people, since natural progressive developmental changes of developmentally disabled people are discernable over a period of a month or even less. Accordingly, the second field-test was conducted two weeks after the initial field-test to determine test-retest reliability using the same observers who collected the information initially. The results are presented in the form of a correlation matrix in Table 23.

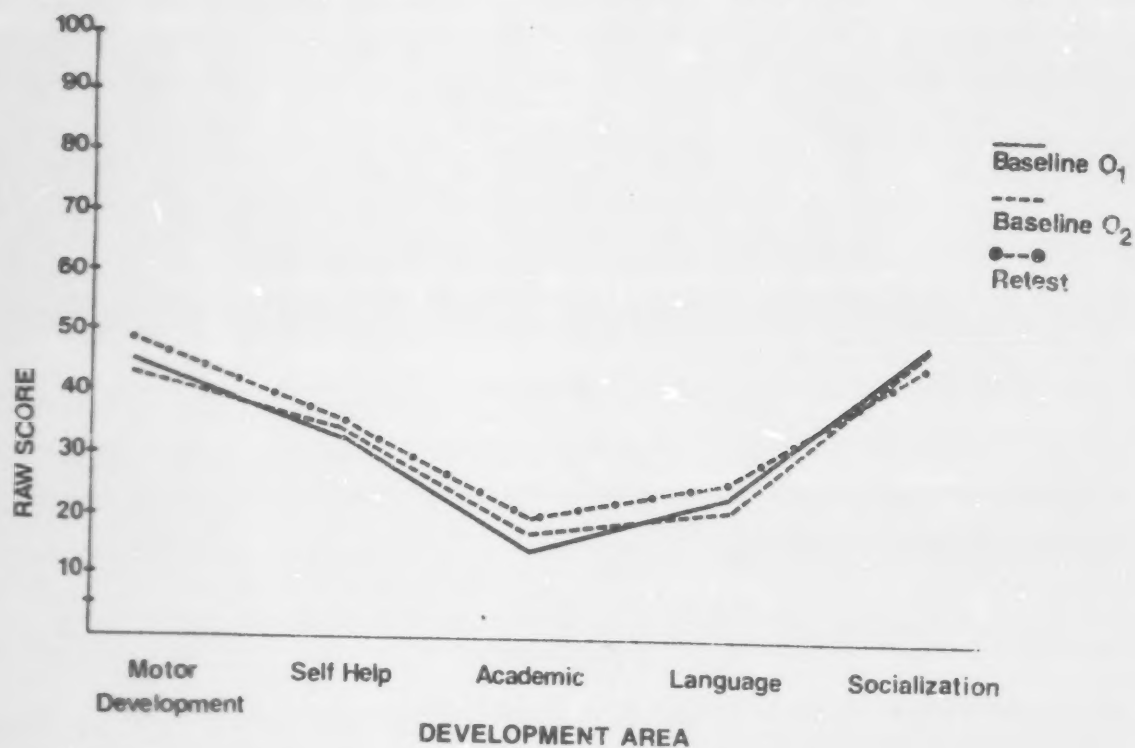
TABLE 23
Test-Retest Correlation Matrix
(n = 60)

Observation 2	Observation 1					
	Total Score	Motor Develop.	Self-Help/ Inde. Living	Academic	Language	Socialization
Total Score	.988					
Motor Development		.939				
Self-Help/ Inde. Living			.967			
Academic				.931		
Language					.955	
Socialization						.947

While the overall correlations are somewhat lower than in the inter-observer conditions, this effect is accounted for by the fact that some residents were able to benefit from practice during the first exposure to a given item, thereby displaying the typical pretest sensitization.

Figure 5 depicts a typical profile example of observations collected for reliability purposes. The solid and broken lines represent observations by two independent observers and the broken/dotted line represents the observations of the same observer collected two weeks apart.

FIGURE 5
POST-ENTRY RELIABILITY PROFILES



Finally, as a third index of reliability, a split-half coefficient was computed, derived from the observations of a single observer. These observations were tabulated for analysis in a manner similar to odd-even item correlations. In order to arrive at the coefficient, two scores were obtained for each individual by dividing the Post-Entry Monitoring Instrument in equal halves. Since each level consists of five items, thereby favoring the odd items, the first item of each level was used as

a constant and added to the score of the odd and the even items. Split-half reliability mainly provides a measure of consistency with regard to content sampling. Temporal stability of the scores does not enter into such reliability, because the coefficient is derived from a single administration. The odd-even split serves mainly as a check of the interval consistency of items. The results from this split-half analysis are presented in Table 24.

TABLE 24
Split-Half Reliability Correlation Matrix
(n = 94)

Even Items	Odd Items				
	Motor Development	Self-Help/ Inde. Living	Academic	Language	Social- ization
Motor Development	.978				
Self-Help/ Inde. Living		.960			
Academic			.969		
Language				.990	
Social- ization					.982

In summary, to express the consistency with which the Post-Entry Monitoring Instrument measures behavioral observations, three different indices were computed to yield different measures of reliability which vary in content. The measures of agreement calculated demonstrate consistency in the recording of observed behaviors between observers and across time, as well as internal consistency. The high reliability of the Post-Entry Monitoring Instrument suggests that data from two observers do not reflect the idiosyncratic judgments and that alternate observers, appropriately trained, would produce similar data.

Monitoring

With the demonstration of the accuracy and consistency of data collected on the Post-Entry Monitoring Instrument, the instrument was ready to be implemented as a monitoring device. Since the instrument serves not only as an assessment tool, but can be used as a monitoring tool it is not limited to the period before the systematic implementation of training programs; it should also be given on a regularly basis throughout the intervention and, afterward, during periodic follow-up periods to facilitate program adjustment and correct maintenance actions on new skills.

If the Post-Entry Monitoring Instrument is employed as a monitoring device, the following procedures are recommended. First, baseline data (pre-test) are collected on all five subscales of the instrument. The observer commences his behavioral observations with Item 1, Level I on each subscale and continues until a ceiling level is reached. That is, if the person to be assessed passes all items of a given level, the observer continues upward until three consecutive items are failed regardless of level. If the individual fails to perform two of the five behaviors at a given level, the observer is instructed to resume his observation on the next lower performance level.

The Post-Entry Monitoring Instrument may be used in its entirety or separately by subscale. Examples of the first application include a person's transfer to a new facility, admission to a community-based program, etc. The second type of monitoring uses separate subscales independently for periodic monitoring of a specific skill area such as motor development. After administering the Motor Development subscale, those behaviors which the individual failed to perform or those behaviors which were elicited

only with physical or modeling cues may be used as target areas for intervention for the development of skill proficiency.

To illustrate the post-entry monitoring system, the following case history is presented to exemplify the procedure.

Tommy is an active, blond-haired, blue-eyed four year old who was admitted to SEVTC in August, 1975. His parents are divorced and, before his admission, he was living at home with his mother, who referred him for services. He was born in a twin delivery after 30 weeks gestation, weighing 1 lb. 14 oz. at birth. After a year of hospitalization which was characterized by a stormy neonatal period requiring large amounts of oxygen and heroic attempts to save his life, he was discharged in 1972 at a weight of 3 lbs. 11 oz. At the age of seven months it was discovered that he suffered from retrolental fibroplasia in both eyes.

When he was admitted to SEVTC, his entry performance level in six developmental areas was established as 0.7 in a local eight-level programming hierarchy. He was completely nonverbal and had no observable social skills. Although his mother described him as a happy, good natured child, he usually did not respond to other people and his play was of a solitary nature. He also engaged in a variety of tantrum behaviors such as screaming and kicking. Frequently, he would play with his fingers, staring at them - a sign that he was slipping into his own world. Tommy's service contract called for toilet-training and dressing skills. The discharge plan for Tommy is to return to his mother and to be placed in an appropriate community program.

During Tommy's initial baseline assessment (pre-test), data were collected under three different conditions to guarantee consistency of scores: by two different observers and by the same observer on two different occasions to guarantee a representative sampling of his behavior. In Tommy's case this was particularly important since the type of behavior he displayed was usually dependent upon the person who attempted to elicit the skills. Perceived personality characteristics and familiarity with a staff member might broaden or narrow his behavioral repertoire. His overall skill level was also susceptible to fluctuations; for instance, he might perform a given task one day but refuse to do so the next.

FIGURE 6

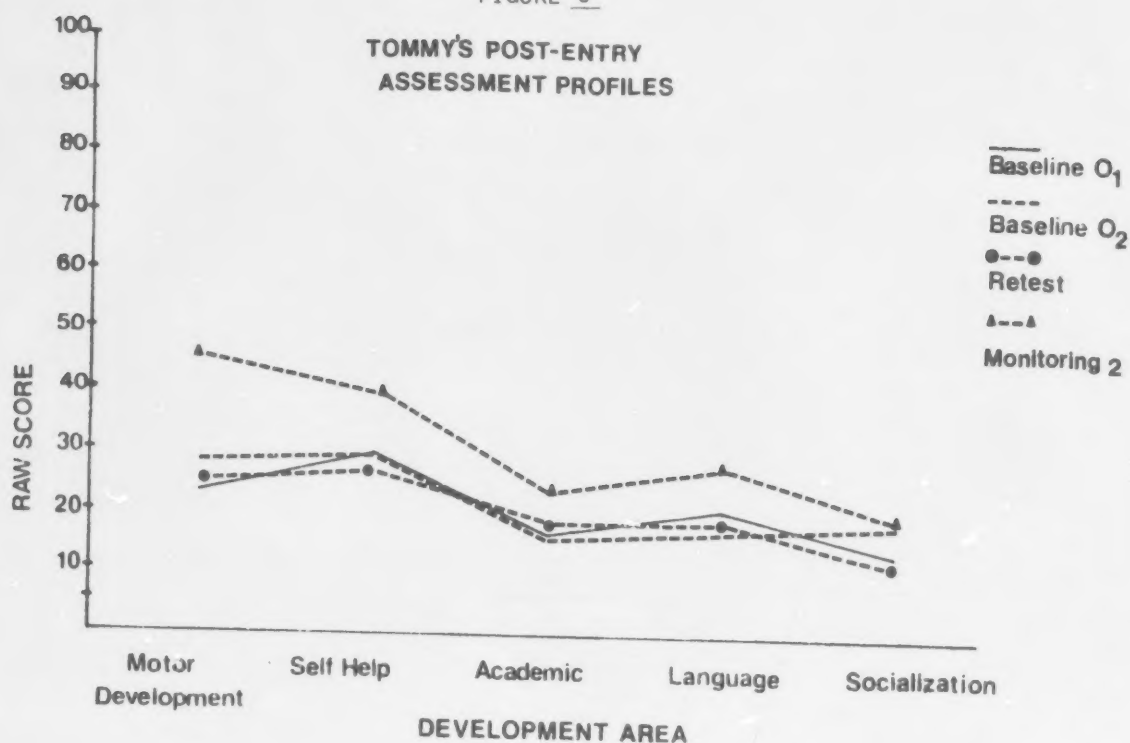


Figure 6 shows Tommy's baseline assessment. As indicated by the solid and broken lines, both observers observed highly comparable behaviors. Similarly, the second assessment occasions represented by the broken/dotted line yielded a comparable profile. Based on this assessment, the academic and language areas were selected as target points for subsequent program implementation. Although Tommy's profile also showed a depressed score in the area of socialization and self-help, language and academic programs were yoked because of the close relationship between the rate of acquisition of linguistic competence and cognitive development. Furthermore, it was anticipated that the acquisition of a basic language repertoire might facilitate toilet-training. After directing the attention of the immediate training staff to these specific behavioral areas, a number of training programs were selected to elevate Tommy's performance in the target domains. The linguistic programs included imitation of sound chains, reproduction of words from memory, and correlation of articles of clothing with body parts. In the academic area, Tommy was exposed to basic color and shapes, taught to recognize objects in his daily environment, etc.

Two months after the original baseline assessment, the Post-Entry Monitoring Instrument was administered again to monitor Tommy's progress. His monitoring profile, represented in Figure 6 by the broken lines, interspersed with triangles, showed considerable gains in both target areas. At this time, Tommy was able to identify pictures, recognize the names of major body parts, and make verbal responses to simple requests. Furthermore toilet-training, which was implemented between the baseline and monitoring assessments, had progressed at a rapid rate. The case of Tommy illustrates that systematic monitoring can be highly effective in identifying the need for a new program and for documenting behavioral change units.

In addition to maintaining up-to-date records on persons undergoing preparatory training for community integration, it should be noted that monitoring progress also provides an excellent and objective measure of program effectiveness. While program evaluation is an activity which is qualitatively different from behavioral assessment, it is nevertheless closely related to it. Demonstrating that behavioral change is the direct result of some form of programmatic manipulation serves as a major mandate for virtually all program evaluators. Assessment ties closely to program evaluation because the most essential kind of comparison to be made is between the assessment of the individual's status before an intervention (pre-test) and the assessment of his status when all prescribed programs have been completed (post-test).

However, as Jones (1974) pointed out, differences found in pre- versus post-intervention performances are not sufficient reason to conclude that the observed changes are the result of programmatic manipulation. Any observed change might have occurred by chance, triggered by maturation or sufficient learning prerequisites, or the behavioral changes may have occurred as a simple coincidence during the interval between planned

programmatic interventions. From the standpoint of methodology, the ideal design for an evaluation of program effectiveness would involve the random assignment of individuals to treatment and control groups. However, in most practical situations, when the efficacy of an intervention program needs to be determined, such random assignment is frequently not possible for ethical reasons.

Nevertheless, with a few additional data sheets designed to collect information concerning possible outside influences which might have caused an observed change, the Post-Entry Monitoring Instrument can be employed effectively in program evaluation. Kazdin (1975) strongly encouraged the use of non-target behavioral measures that are not of direct teaching focus but measure change which might occur simultaneously with programmatic intervention. One example of such a data sheet is the Personal Data Sheet which is specifically intended to assess changes in the person. It should be filled out by the observer before or after each assessment, since sudden decrements in performance may sometimes be accounted for by changes in health status or attitude. While the Personal Data Sheet keeps track of personal changes which may be responsible for the behavioral changes observed, the Staff Questionnaire is designed to assess environmental changes and serves as the second additional data sheet. Examples of both forms are provided in Attachment I.

In summary, it may be noted that the Post-Entry Monitoring Instrument, along with some control measures of extraneous influences identifying changes which might concomitantly take place in the individual's personal and social environment, can be a useful tool for program evaluation. The degree to which evaluation findings are translated into revised plans, thereby leading to improved performance, will depend on the individual facility or agency adopting this procedure.

Validity

The first aspect of dependability in assessment procedures was concerned with reliability, which refers to the consistency of scores. Reliability is mainly of interest as a necessary prerequisite for valid measurements. However, it should be noted that high reliability is a necessary but insufficient requirement for establishing validity. While it is true that low reliability places an upper bound on validity, it is not necessarily true that validity will increase as reliability increases. It happens occasionally that high reliability is taken to be a sign of validity. Such a conclusion, however, is unwarranted because observers or raters may have the same common biases or because the observations or ratings express something entirely different from what was intended by the instructions (Magnussen, 1970).

The second aspect of dependability, validity of an instrument, concerns the question of whether an instrument measures what it purports to measure (Anastasi, 1976). Fundamentally, all procedures for determining validity are concerned with the relationships between performance on the test and by other independently observable facts regarding the behavior characteristics under consideration. Validity is typically expressed as the correlation between measurements obtained from the instrument and another known measure of the criterion variable. Especially in the case of criterion-referenced measurements, validity is of major concern, since criterion-referencing itself suggests that validity depends upon the correspondence of items with the objectives to which the instrument is referenced. Items which are matched to program goals usually facilitate validation by providing high correspondence between the two.

In order to establish the validity of the Post-Entry Monitoring Instrument, a third field test was scheduled to collect up-to-date assessment

profiles of the SEVTC resident population. The external criterion serving as the comparative measure of an individual's level of functioning was derived from a questionnaire which was submitted to all cottage supervisors (SEVTC cottage supervisors typically have 8-10 residents under their supervision and are in daily contact with the residents), who were asked to rate their residents in terms of community readiness. Table 25 represents the five-point rating scale which conceptualizes community readiness along a continuum ranging from minimal independence to complete autonomy. Cottage supervisors were instructed to place a check mark on the scale point corresponding to the resident's readiness for transfer to community-based living alternatives. If the resident's level of independence did not correspond to any of the full scale points but fell in between, decimals were to be used. For example, if the individual was judged between 3 and 4, he might receive a rating of 3.6, indicating his level of independence was rated between 3 and 4--somewhat closer to 4 than to 3.

The comparison of scores on the Post-Entry Monitoring Instrument and ratings made by cottage supervisors were analyzed as follows: a level score was computed for each subscale representing the highest attainment in that particular behavioral domain. Subsequently, a composite overall score was calculated to represent the average level-score across the five subscales. This average level-score was compared to the cottage supervisor's rating. Table depicts the data analysis employed in the validation of the Post-Entry Monitoring Instrument.

The correlation between the averaged level-scores of the subscales and the cottage supervisor's ratings of community readiness yielded a coefficient of .91, representing the formative validity coefficient of the instrument. The results of the validation study indicated high

TABLE 25

RATINGS OF RESIDENT'S READINESS FOR COMMUNITY PLACEMENTS

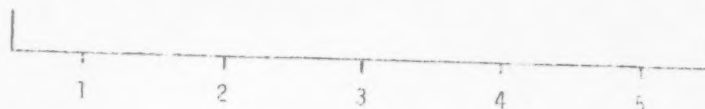
Resident:

Cottage:

Team Leader:

Date:

Please rate the resident's level of independence on the five-point scale given below by placing a check mark over the number which in your judgment corresponds to his readiness for community-based living alternatives.



Before you place your check mark, please read the description of each scale point carefully.

- 1 = corresponds to absence of minimal independence. At this level, the individual requires continuous care and medical support. Frequently he is non-ambulatory and/or severely physically handicapped. Twenty-four hour residential care is necessary for maintenance of an individual at this level.
- 2 = the person is still very dependent upon assistance and supervision in his daily activities although he can take care of some basic needs with assistance (for example, self-help skills such as eating, dressing, toilet training). In case of a child, a foster family home is a placement alternative since such an environment provides opportunities for continued supervised care and assistance. In case of an adult a short-term specialized facility emphasizing systematic training efforts is an appropriate placement.
- 3 = the individual independently takes care of his personal needs such as eating, dressing, toileting. If he is an adult, he resides at a short-term facility and profits from training programs including pre-vocational training. In the case of a child, specialized preschool or school programs for children with developmental disabilities (not public school programs) would be beneficial. In general, individuals at this level of independence are still dependent upon continuing supervision and sheltered living.
- 4 = the individual lives in a structured group home-like programs for continuing development of social, academic, and communication skills. In the case of an adult, he could function in a special employment setting such as a sheltered workshop and receive assistance in the management of his personal affairs (money, work schedule, transportation). A child at this level of independence attends special classes in public schools (TMR or EMR).
- 5 = the person lives in independent living arrangements such as an apartment cluster (i.e. functional grouping of a small number of apartments housing retarded persons), co-residence apartment (i.e. shared by two or three retarded persons), or maximum-independence apartments. Individuals at this level are employed in the community and are capable of effective social and economic functioning in a "normal" environment. Occasional supervision would be provided through a case worker in the local mental retardation agency. In the case of a child, he attends regular classrooms in public schools.

TABLE 26
Post-Entry Instrument Validation
(n = 77)

Resident	Level of Functioning						Cottage Supervisor Rating
	MD	SH	A/C	LAN	SOC	$\bar{X}$	
1	2	3	1	2	2	2.0	2.0
2	4	4	3	3	3	3.4	3.5
3	4	3	1	5	5	3.6	3.8
4	4	3	2	4	4	3.2	3.5
5	3	3	3	3	4	3.2	3.5
.	.	.	.	.	.	.	.
77	4	2	2	2	2	2.2	2.0

$r = .91$

predictive validity; i.e. scores on the Post-Entry Monitoring Instrument are valid predictors of an individual's level of independence and his readiness to move along a continuum of community-based services.

A second type of validation study was designed to assess the content validity of the Post-Entry Monitoring Instrument. For this purpose the Post-Entry Monitoring Instrument was compared with an already established scale, the AAMD Adaptive Behavior Scale. The underlying assumption here is that both instruments measure similar or comparable skills and behaviors. Consequently, scores derived from both instruments are expected to correlate.

The sample population for this cross validation study consisted of 55 nonresidential mentally retarded adolescents and adults who received programming through CECRA (Contingency Engineered Classroom for Retarded Adolescents), serving the Tidewater area. Both instruments were administered to each person and scored according to the recommended guidelines. Subsequently, a Spearman rank order correlation was computed for the two sets of data. The resulting coefficient was $r = .92$.

TABLE 27
Analysis of Cross-Validation Data
(n = 55)

Post-Entry Monitoring Instrument Rank	AAMD Scale Rank	d
1	6.5	5.5
2	10.5	8.5
3	18	15
4	1	-3
5	22	12
.	.	.
55	54	-1
$r = .92$		

Table 27 represents the analysis of the cross validation data. In addition to providing a second measure of validity, i.e. content vs. predictive validity, the cross-validation also reinforced the high degree of validity demonstrated in the initial formative validation.

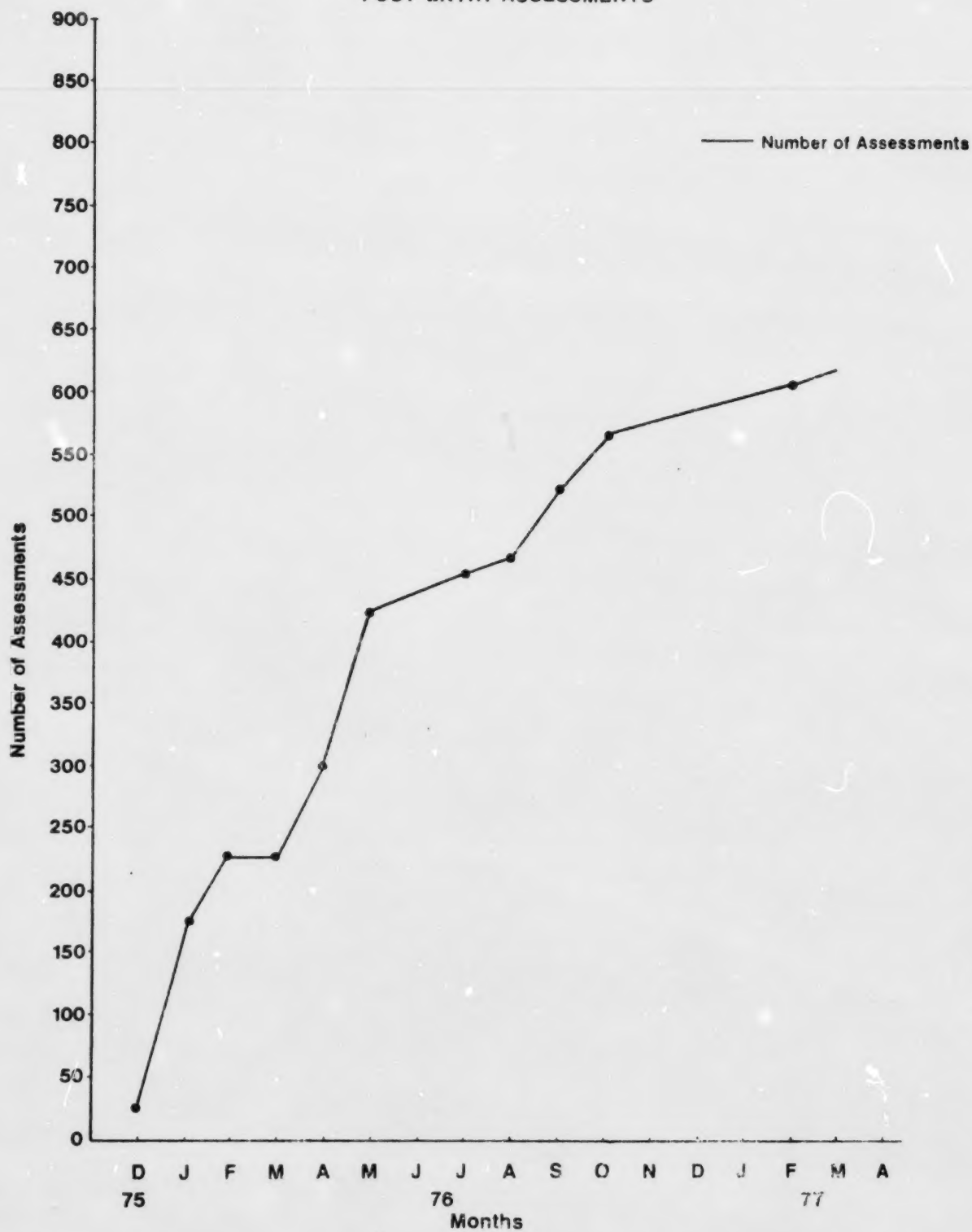
The Post-Entry Monitoring Instrument has empirically demonstrated reliability and validity in measuring and monitoring behavioral changes resulting from programmatic intervention. The final criterion to be evaluated is that of utility. Given the precision and validity of post-entry assessment, a substantial contribution to the standardization of program-entry level can be made. Then, based on post-entry assessments, a decision-theoretic approach to program implementation is recommended. Given a set of criterion scores, for example, using 75% of the total skill competency of a given level as cut-off score will allow decisions in two different directions. If the individual has reached or exceeded the 75% cut-off level, the decision would be to advance him to the next sequence of programs. If the score falls below the 75% level, the recommendation

would be to retrain the individual and repeat the last sequence of programs.

Presently, the instrument is used at SEVTC with all residents who are transferred to the training center. In addition, it is also employed as a component of the customary six-month review when each individual is being re-evaluated. Over the past two project years well over 600 post-entry assessments have been collected. Figure 6 shows the cumulative number of administrations of the Post-Entry Monitoring Instrument.

In sum, it may be stated that some of the major functions of the Post-Entry Monitoring Instrument include facilitating programmatic decisions, evaluating training programs, and providing an objective means for data collection. The instrument is designed for professionals, paraprofessionals, and various agencies involved in preparing individuals with developmental problems for community entry.

FIGURE 7
POST-ENTRY ASSESSMENTS



Chapter VII

COMMUNITY LIVING SKILLS INSTRUMENT

Introduction

When a person has demonstrated the acquisition of critical living skills, the individual should have the opportunity for living choices in the least restrictive environment. This is support legally with "the right to choose" (NARC, 1973) living alternatives in the community. Many empirical investigations are presently in progress to assess the relative effectiveness of various community alternatives to institutionalization, the variables affecting adjustment within alternative community settings, the manner in which the general public will accept the mentally retarded as they are discharged from institutions, and the behavior/skill characteristics that might be associated with successful or unsuccessful community living (Rosen, Floor & Batter, 1972; Bjaanes & Butler, 1974; Nihara, 1975; Rosen Kivitz, Clark & Floor, 1974; Rosen, Clark, Kivitz, 1977).

This movement toward alternative living service systems is correlated with an almost universal professional acceptance of the normalization principle. Community integration, by definition, mandates the development of small living units since large numbers of individuals grouped in one place constitutes segregation from rather than integration into the community. In addition, community-based living alternatives (CLA) must be dispersed within and between population centers as part of the community at large rather than being placed at the periphery. It is only by using many different types of living options that one can realistically hope to achieve the goal of integration into the community and adequately recognize the rights of the mentally retarded. Furthermore, unless these living arrangements are organized into a coherent system, future prospects of integrated community living for handicapped persons are not very promising.

The concept of community living alternatives for mentally retarded citizens implies that the ideas of advancement, of mobility and of change are important. Consequently, the range of living alternatives available to the developmentally disabled must reflect the variety of choices offered to the non-handicapped population. A person may move from an institution, to a skilled nursing home, to a home, to a satellite apartment, back to the institution, etc. Similarly, if an individual cannot handle less restrictive living, movement should be back toward more supervision rather than be removed from the community entirely. This type of flexibility is an important characteristic of optimal community integration. It is almost impossible to achieve such flexibility in large houses because of management problems and the tendency to provide group programs for the lowest common denominator rather than for each individual (NIMR, 1975). A network of smaller community houses offer managers the opportunity to tailor programs and living alternatives to the person. In addition, the development of a well coordinated system of community-based services provides mechanisms facilitating a gradual change in societal attitudes toward less stereotypic views of the mentally retarded person as a hopeless, eternally dependent individual. Some of the relevant attitudes which are slowly emerging include greater community acceptance of differentness, greater readiness to accord citizenship rights to deviant persons and the growing realization that even the profoundly retarded person has some means to adapt, even if these are modest.

The major goal of the project for the third year was to develop an instrument to be used as an assessment device which would allow managers and staff of CLA's to follow the person's movement through a wide range of living options. The Community Living Skills Instrument is intended as a survey tool to provide objective information to facilitate placement in the least restrictive alternative and to assess progress in skill areas relevant to community living. In order to approach the variety of potential community

living options in a systematized manner, levels of need for supervision were differentiated to distinguish between individuals according to various degrees of independence.

Level I community alternatives are designed for the person with minimal skills who require specialized programs and extensive supervision. These include nursing homes, sheltered living arrangements, intensive medical treatment or intensive behavior units. This type of residential treatment typically serves very few persons providing them with primary life support or care service. Such placement options usually require extra staffing and 24 hours a day supervision. However, these alternatives should not be considered as permanent placement options but as opportunities for intensive treatment to reduce some of the consequences of severe disability and, therefore, must also provide such training as will be required to prepare the individual to advance to a less restrictive setting.

At the intermediate level of independence (Level II) living options are for persons with semi-independent skill levels. The corresponding living alternatives include boarding, group and foster homes. Among these alternatives, the group home is probably the best known. This placement alternative refers to a relatively small house in the community which offers a homelike environment. They are usually operated by live-in houseparents who provide continued supervision and perform many of the roles which traditionally constitute parenthood appropriate to the age of the residents. The group home may be a transitional living alternative for those individuals with potential for independent or nearly independent functioning, or a long-term residence for those likely to require that degree life-long supervision.

The small group home, located in the community, has become one of the most successful of the current patterns of residential services. The group home typically serves a small number of mentally retarded and/or physically

handicapped individuals--up to a maximum of 20 who are able to participate in a variety of jobs, sheltered workshops, day care centers and public or private education or training programs that are meaningful to their habilitation and general wellbeing. The homelike milieu provides for semi-independence with individualized supervisory controls, opportunities for appropriate interpersonal relationships among peers, stimulates social development and provides opportunities for participation in community activities. More important, group home living gives the person a sense of privacy, identity and dignity.

During the last few years, there has been a rapid growth of group homes. For example, in the State of Washington, group homes numbered four in 1969, while presently there are about fifty in operation (Sigelman, 1973). Comparable increments of group home residences have been reported by other states. In addition, prospective group home candidates have become a concern of mental retardation agencies across the country, since these individuals who no longer require total institutionalization would greatly benefit from the degree of support and supervision offered by community-based group homes. Although the group homes may not be the epitome of the rehabilitation process, it is farther along that road than the traditional institutional system. The group home concept is an important milestone along the continuum of services, since it acknowledges the fact that successful normalization can only be achieved if the resident who leaves an institution or training center can go to a situation that offers him opportunities for a slow transition and continued growth in a community.

Also occupying a midlevel of independence (Level III) is the foster home for individuals, adult or children, who have little or no employment potential. Especially in the case of children, the normal place, as for any child, is to live at home--either natural or surrogate. Physically and mentally retarded children who have spent most of their lives

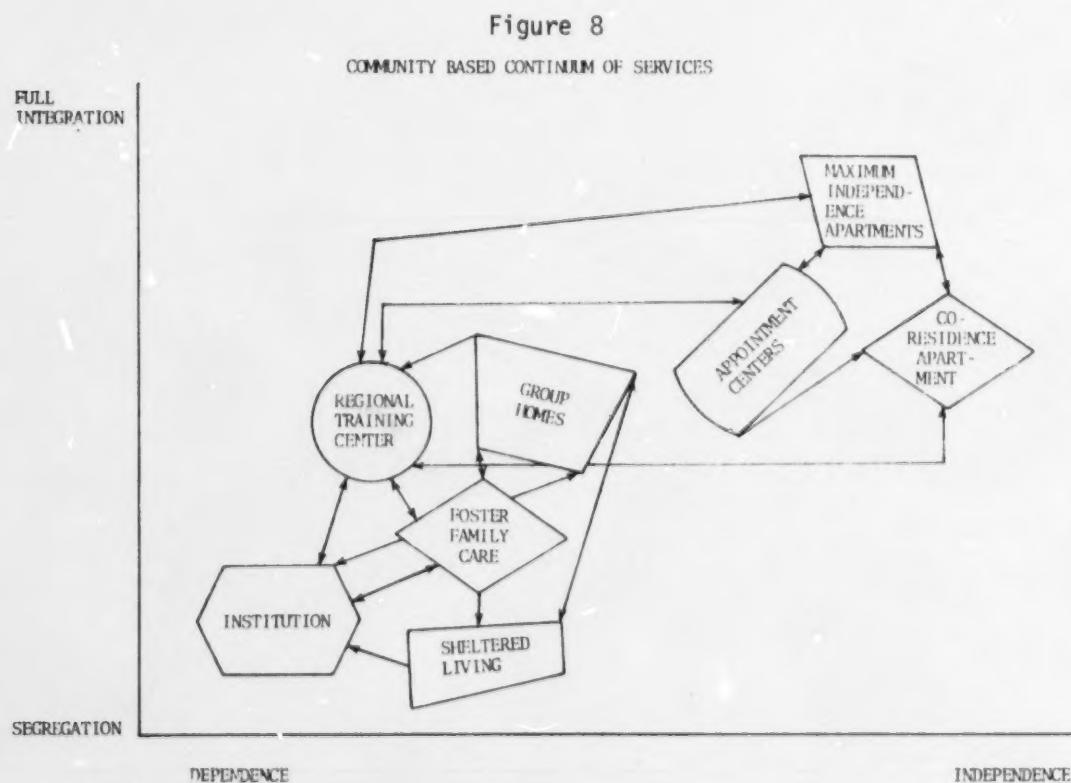
in the institution or other non-programmatic environment can be provided with the benefits of a substitute family by means of this community alternative. Foster family care can supply the person with parent surrogates who, within the setting of their home, can give the individualized care, attention, teaching and love necessary for developmental progress. Presently, foster family care has the largest number of previously institutionalized residents placed in the community. In a nationwide survey, Morrissey (1966) presented statistics on the use of family care homes as an alternative placement. Approximately one-half of the 96 institutions reported they utilized such programs. Foster family care is a particularly appropriate residential option for young children to live in a home environment especially when they are supplemented with expanded community programs and supportive services.

Finally, at the level of maximal independence (Level III), minimum supervision options are available for mentally retarded adults. These placement alternatives include the apartment cluster, the single co-residence apartment, and the single maximum independence apartment. Apartment clusters are composed of three or four neighboring apartments in relative physical proximity. Supervision is provided by a staff person residing in one of these apartments or near by. The single co-residence apartment is intended for shared living, i.e. one or two non-handicapped individuals and two or three mentally retarded persons live together as roommates or friends. The L'Arche communities inspired by Jean Vanier, are the most notable examples of shared living. Finally the maximum independence apartment is occupied by two to four adults with all supervision and assistance supplied by a citizen advocate or by a case worker.

All these apartment situations are highly flexible and relatively inexpensive. Properly managed, they can offer strong peer modeling and "learn-by-doing"

training opportunities. This kind of arrangement makes the retarded person part of a normal living situation from which he can learn by becoming involved in normal community activities.

The Community Living Skills Instrument is designed to monitor services geared to specific developmental needs of individuals moving along the continuum of dependence-independence with this variety of community based living alternatives. Continuous assessment of progress and personal growth is necessary in the transition from supervised housing options to totally independent living because the movement of the person along the continuum is determined by his rate of development, and by his specific needs. Ultimately, the determination of the timing and the direction of movement should be objective and documented with empirical assessment data based on the assessment of past behavioral accomplishment and projected skill capacities of the mentally retarded individual. Figure 8 depicts the residential services continuum for which the Community Living Skills Instrument is intended.



Development of the Community Living Skills Instrument

The major goal in developing the Community Living Skills Instrument was to validate a criterion-referenced, programmatically useful assessment device which provides assessment information with greater than 80% reliability and validity.

As in the case of the Post-Entry Monitoring Instrument, the initial developmental stages of the Community Living Skills Instrument were largely concerned with the collection of experimental items (skills). Potential items were arbitrarily grouped in the following skill areas: motor, self-help, independent living, communication, social, interpersonal, academic, vocational, leisure time, economic (budgeting and purchasing), homemaking, mobility, and planning skills.

The next step in the developmental sequence was to appoint a group of independent raters who had either practical or empirical knowledge of the present status of community based living alternatives and who were aware of some of the critical living skills which are specific to various placement options. In order to obtain a representative group of raters, experts in the field of mental retardation were contacted nationwide. The final group of raters consisted of 35 individuals who fell into the following categories.

TABLE 28

Raters of the Experimental Items of the
Community Living Skills Instrument

Mental Retardation Coordinators	SEVTC Staff	CLA Caretakers	Others
8	6 n = 35	16	5

The mental retardation coordinators were local people associated with mental health/mental retardation services boards in the southeastern region

of Virginia. The participating SEVTC staff were individuals who were actively involved with community services and in a number of instances served as the liaison between the Training Center and local community-based facilities.

CLA caretakers included the managers of the three group homes run by the Tidewater Association for Retarded Citizens in Norfolk, foster parents of retarded children, and the social workers who are supervising the residents discharged from SEVTC to two apartments in Virginia Beach. In addition, the following facilities and/or agencies participated in rating the items:

Spaulding for Children, Westfield, New Jersey; University of Puget Sound Group Homes, Tacoma, Washington; Victory House, Savannah, Georgia; Willowbrook State School, Staten Island, New York; Sarasan House, Meriden, Connecticut; and Sunlight House, Scituate, Massachusetts. All of these facilities represent community based residential programs serving less than 20 individuals. All of them share the philosophy that emphasis is placed on "home" rather than on "program". Consequently, most formal training and education takes place outside the residence. The heterogeneity of this group of raters reflects a representative variety of options among community based programs.

Once the items to be rated were categorized according to skill areas they stratified along a continuum of independence ranging from minimal to maximal independence. This underlying dependence-independence continuum corresponds to the three levels reflecting the various needs of supervision outlined in the introduction of this chapter. The raters were given the following instructions.

"The following three areas of community living alternatives associated different degrees of independence and behavioral competence are conceptualized:

- I. Minimal Independence. This area of living is for the person who, because of physical/medical conditions/intensive training, requires continuous supervision. Specific living alternatives include residential institution, nursing homes, and sheltered living arrangements.
- II. Semi-Independence. This area of living is for the person who has acquired a basic behavioral repertoire that permits a greater degree of independent functioning. However, some assistance and supervision are needed. Specific living alternatives at this level include group, boarding, foster, or natural homes.

- III. Maximal Independence. This area of living is for the person who is capable of functioning with minimal supervision or advocacy short of complete independence. Specific living alternatives at this level include apartment clusters, co-residence apartments, and satellite apartments.

Your task is to rate each behavior listed in a given skill area on a four-point scale in terms of importance for one of the three levels of living in the community as described above using the following scale:

- 1 = unimportant
- 2 = somewhat important
- 3 = important
- 4 = vitally important

Please make sure that you rate each skill once in each of the different areas of community living. For example, sitting independently may receive a rating of 1 (i.e. not very important for living in a community environment requiring minimal independence [i.e. a nursing home situation]). However, the same skill might take on a different importance when considered for a community living environment that requires a considerable independence. Consequently, the same skill may be rated 3 or 4 when its importance is being considered for the semi- or maximally independent levels of community living. Each target behavior is intended to represent a skill that exists in the behavioral repertoire of the individual at the time when placement decisions are being made rather than representing a learning potential which might be developed given the necessary training."

Finally, the raters were encouraged to supply additional behaviors which they considered crucial for a specific level of community living. These additional behaviors were listed after the items in a given skill had been rated. Table 29 presents an example of the rating system taken from the behavioral domain of planning skills.

TABLE 29

Example of the Rating Procedure

Skill Area	Level of Community Living											
	Minimal Independence				Semi Independence				Maximal Independence			
	1	2	3	4	1	2	3	4	1	2	3	4
Planning Skills												
Arrives at scheduled events on time												
Makes decisions concerning activities with minimal supervision												
Organizes daily activities												
Schedules activities by time												
Schedules his own activities												
*Add additional planning skills you consider important for community life, enter them in the appropriate independence column and rate the skills added.												

Within this rating system, a total of 614 variables in 13 different skill areas were submitted for rating.

Analysis of Item Ratings

Item analysis was performed utilizing the Statistical Package for the Social Sciences (SPSS-10). The relevant output included the mean rating for each item, the standard deviation, and variance. In addition, absolute, relative, and cumulative frequencies were recorded. The output format is illustrated in Table 30 using the item "budgets income" rated for "maximal independence" in the area of economic skills as an example.

TABLE 30
Computerized Item Analysis
Item: Budgets Income

Category Label	Code	Absolute Frequency	Relative Frequency	Adjusted Frequency	Cumulative Frequency
Poor	1	1	2.9	2.9	2.9
Low	2	3	8.6	8.6	11.4
Medium	3	10	28.6	28.6	40.0
High	4	21	60.0	60.0	100.0
Total		35	100.0	100.0	
Mean	3.457	STD Dev.	0.780	Variance	0.608
Valid cases		35	Missing cases	0	

To qualify for inclusion in a given skill area at one of the three predetermined levels of independence, an item must receive a rating of 2.75 on the four-point scale (1 = unimportant, 2 = somewhat important, 3 = important, 4 = vitally important). This qualifying criterion resulted in a considerable reduction of items. Remaining items which meet the

criterion of inclusion were drawn together in a given skill area resulting in the experimental form of the Community Living Skills Instrument. The first draft to be field tested encompassed the following skill areas with the respective number of items that had met the qualifying criterion in parenthesis: motor skills (15), mobility skills (12), self-help skills (25), homemaking skills (24), independent living skills (15), social skills (11), interpersonal skills (6), communication skills (18), academic skills (11), economic skills (20), vocational skills (9), planning skills (5), leisure time skills (2).

Inspection of the skill areas and items revealed two problems which called for further statistical analysis. First, there appeared to be a considerable degree of overlap between certain behavior domains. For instance, the distinction between social and interpersonal skills seemed arbitrary and questionable. Similarly, motor and mobility skills probably include a number of common behaviors. Second, the great variability of number of items within a given skill area ranging from two items under leisure time to twenty-five items in self-help presented another problem.

To resolve the first problems of communality between skill areas, all variables contained in the 13 behavioral domains were subjected to a factor analysis using a varimax rotation. Nine principal factors emerged which were labeled as follows: mobility, self-help, domestic, independent living, practical knowledge, communication, interpersonal relationships, and vocation/recreation. These nine factors were retained to represent the subscales of the Community Living Skills Instrument.

The second problem of variability of number of items within a given skill area was reduced by retaining 25 items with the highest item ratings in the first five skill areas (i.e. mobility, self-help, domestic, independent

living, and practical knowledge) and 15 items in the remaining skill areas. Since in some skill areas, the number of items fell below 25 or 15, respectively, the behaviors added by the raters were analyzed. Additional skills which were rated higher than 2.75 and could be accommodated by one of the factors in terms of item content were utilized in cases where skill areas were deficient of one of several items. The result of these two manipulations was an instrument consisting of eight balanced subareas with a total of 170 items.

Components of the Community Living Skills Profile

In addition to the behavioral checklist in the skill areas listed above the Community Living Skills Instrument includes a number of components which are an integral part of the assessment process. The Medical/Psychological Evaluation gathers information concerning the person's medical diagnosis, psychological evaluations such as scores derived from various psychological tests (i.e. intelligence, vocational tests, social maturity scales, etc.), and level of mental retardation and length of institutionalization. This data sheet also addresses the person's legal status and his prior placement. The Physical Disabilities data sheet is provided to record physical handicaps, motor and sensory deficits, current medication and calls for a general evaluation of the person's overall health status.

An Inappropriate Behavior Checklist is provided which categorizes maladaptive behaviors into the following categories: antisocial behaviors, intollerable behaviors, inadequate interpersonal relationships and inadequate work performance. The Behavior Asset/Deficit Report is provided for the caretaker or contact person to independently describe some of the person's competencies and deficiencies without being asked specific questions. Finally, the Transfer Rating sheet gives several people who have known

or worked with the person an opportunity to rate him in terms of being a good or poor prospect for placement in a less restrictive living alternative. The raters also give their estimates of the individual's overall level of functioning as well as indicating how soon transfer to another facility can be attempted.

So far, the components of the Community Living Skills Instrument were concerned with measuring behavioral skills or deficits of the person. The following additional data sheets are provided for the assessment of the potential receiving environment. The Environmental Analysis/Community Special Services Checklist is based on the rationale that a good knowledge of the abilities of the developmentally disabled person alone is not enough for making optimal placement. It is equally important to have a thorough knowledge of the resources of the receiving environment so that individual skill proficiency and environmental resources can be matched. Consequently, the Environmental Analysis assesses the availability of resources in the community as well as the use which the caretaker makes of the available resources. The Community Special Services checklist classifies community resources according to the age of the person who might be using the various services. Hence, available services are listed for infants and preschool children, for school age children, adolescents, and adults. Finally, the potential caretaker is asked to list services or programs on this data sheet which are not available in his community, but which would be useful to his prospective client.

Finally, the Program Development Plan requires the manager to set specific goals for the handicapped person. These goals may be remediation of skill deficits, deceleration of inappropriate behaviors or acquisition of specific skills. These additional forms along with the Community Living

Skills Instrument provide data based information on the basis of which decisions regarding placement and program implementation are made.

Sample

The sample population on which the Community Living Skills Instrument was developed is best characterized by its heterogeneity. Residents from the following facilities participated in the field tests to establish reliability and validity of the instrument: SEVTC with 37 residents who were drawn from the "Independent Living" cottage complex; Sarah Bonwell Hudgins Regional Center, Hampton, with 17 residents who are mentally retarded adults employed in sheltered workshops or competitive employment; Kirk Cone Rehabilitation Center, Chesapeake, with 36 students; Tidewater Association for Retarded Citizens (TARC), Norfolk, with 20 residents who are residing in the three group homes operated by TARC in Norfolk; a boarding home in Pugsville, with five residents who were discharged from SEVTC; and CECRA (Contingency Engineered Classroom for Retarded Adolescents), Virginia Beach, with 20 students who live with their parents and attend the developmental day classes offered through the program. The final sample consisted of 155 individuals. However, not all of them participated in each field test due to absence, vacation, illness, etc.

The participating residents ranged in age from 8 to 64. Seventy-four were males and 61 were females. All levels of mental retardation from mild to severe/profound were represented as well as the variety of concomitant physical disabilities typically found among the population of mentally retarded individuals. For example, the sample included nine individuals with Down's Syndrome, twelve epileptics, one microcephalic and one spina bifida case. Although a data sheet requesting basic information such as

medical diagnosis, psychological evaluation, and level of retardation was part of the assessment, it is impossible to present the characteristics of the sample in the form of a population matrix, since many managers were unable to supply this type of information requested.

Reliability

The first large scale field test was scheduled for February 24 - March 11, 1977, to establish inter-rater reliability based on 116 dual interviews. The results from this testing indicated consistently high inter-rater reliability coefficients ranging from $r = .82$ to $r = .93$. Table 31 presents the inter-rater reliabilities in the form of a correlation matrix.

TABLE 31

Community Living Skills Instrument
Inter-Rater Correlation Matrix
(N = 116 Paired Interviews)

Rater 2	Rater 1							
	M	S-H	D	IL	PK	C	IR	VR
M	.90							
S-H		.89						
D			.89					
IL				.93				
PK					.89			
C						.87		
IR							.89	
VR								.82
$p > .001$								

M = Mobility
S-H = Self-Help
D = Domestic
ID = Independent Living
PK = Practical Knowledge
IR = Interpersonal Relationships
VR = Vocation/Recreation

Two weeks after the initial assessment each manager was interviewed again for the purpose of establishing test-retest reliability. The test-

retest coefficient across the eight subscales of the Community Living Skills Instrument are tabulated in Table 32.

TABLE 32
Community Living Skills Instrument
Test-Retest Correlation Matrix
(N = 120)

Test 2	Test 1							
	M	S-H	D	IL	PK	C	IR	VR
M	.90							
S-H		.94						
D			.88					
IL				.92				
PK					.89			
C						.88		
IR							.84	
VR								.91
p > .001								

M = Mobility
S-H = Self-Help
D = Domestic
ID = Independent Living
PK = Practical Knowledge
IR = Interpersonal Relationships
VR = Vocation/Recreation

The results from these two field tests suggest that the Community Instrument is a very reliable assessment device. Continued reliability testing appears to be desirable to empirically determine the time interval beyond which consistency over several test occasions begins to deteriorate. Prior experience with the assessment of mentally retarded individuals using criterion-referenced test further revealed that the information gathered via assessments remains relatively stable over a period of three months. If the assessment data are used for decision making, it is recommended to repeat the assessment rather than depending upon data which is older than about three months.

Finally, it is recommended that a graphical record is maintained for each individual to record the assessment information. Figure 9 is an example of how the information may be charted. The graph depicts the data collected by two different interviewers (I_1 and I_2) as well as the test-retest (TR) assessment.

Validity

The validation study was conducted April 26 - May 17, 1977. To establish the validity of the Community Living Skills Instrument, managers or contact persons were required to estimate the best possible placement alternative for each person based on their overall behavior repertoire and level of independence. Three scale points corresponded to three levels of independence characterized by decreasing degrees of supervision. Table 33 demonstrates the procedure employed for validation.

The data were analyzed in the following way: The total score for each skill area was converted into a percentage and the percentage scores were then averaged across the eight subscales to yield the average percentage of items passed. This average percentage of items passed was subsequently converted into a weighted score to which the rating of the manager was compared. The following weights were assigned to the averaged percentage scores: $0 - 33.3 = 1$, $33.4 - 67 = 2$, $68 - 100 = 3$. The next step in the data analysis was the computation of the correlation between the weighted score and the rankings of the manager. The resulting correlation yielded a value of $r = .92$ which represents the validity coefficient. Table 34 illustrates the computational procedure: With the completion of the validation study managers or contact persons had been interviewed using the Community Living Skills Profile. Figure shows the total number of administrations of the instrument.

Figure 8 - Reliability Assessments

COMMUNITY LIVING SKILLS PROFILE

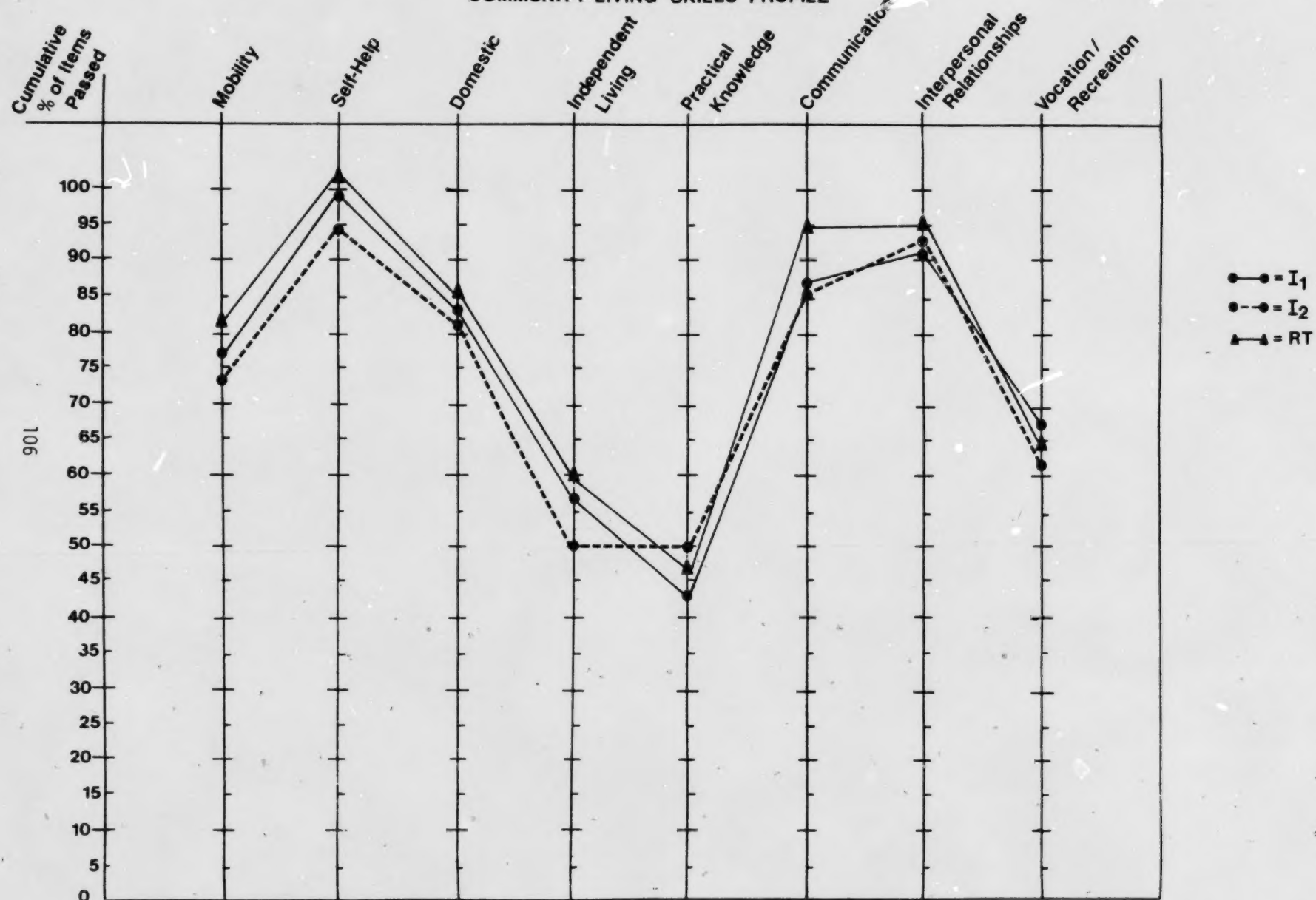


TABLE 33

Manager's Rating of Person's
Best Possible Placement Alternative

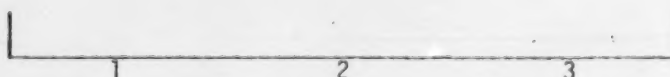
Client:

Residence:

Caretaker:

Date:

Given your knowledge of the extent of the client's (student's) overall behavior repertoire and his level of independent functioning please indicate on the scale below the kind of living environment which would represent the best possible placement alternative for this client (student). Simply place a check mark over the number on the scale which in your judgment represents the optimal environment corresponding to this person's level of independence.



Before you place your checkmark please read the description of each scale point carefully.

1. Miminal Independence. This area of living is for the person who, because of physical/medical conditions/intense training, requires continuous supervision. Specific living alternatives include residential institution, nursing homes, and sheltered living arrangements.
2. Semi-Independence. This area of living is for the person who has acquired a basic behavioral repertoire that permits a greater degree of independent functioning. However, some assistance and supervision are needed. Specific living alternatives at this level include group, boarding, foster, or natural homes.
3. Maximal Independence. This area of living is for the person who is capable of functioning with minimal supervision or advocacy short of complete independence. Specific living alternatives at this level include apartment clusters, co-residence apartments, and satellite apartments.

Figure 9

Community Living Skills Instrument

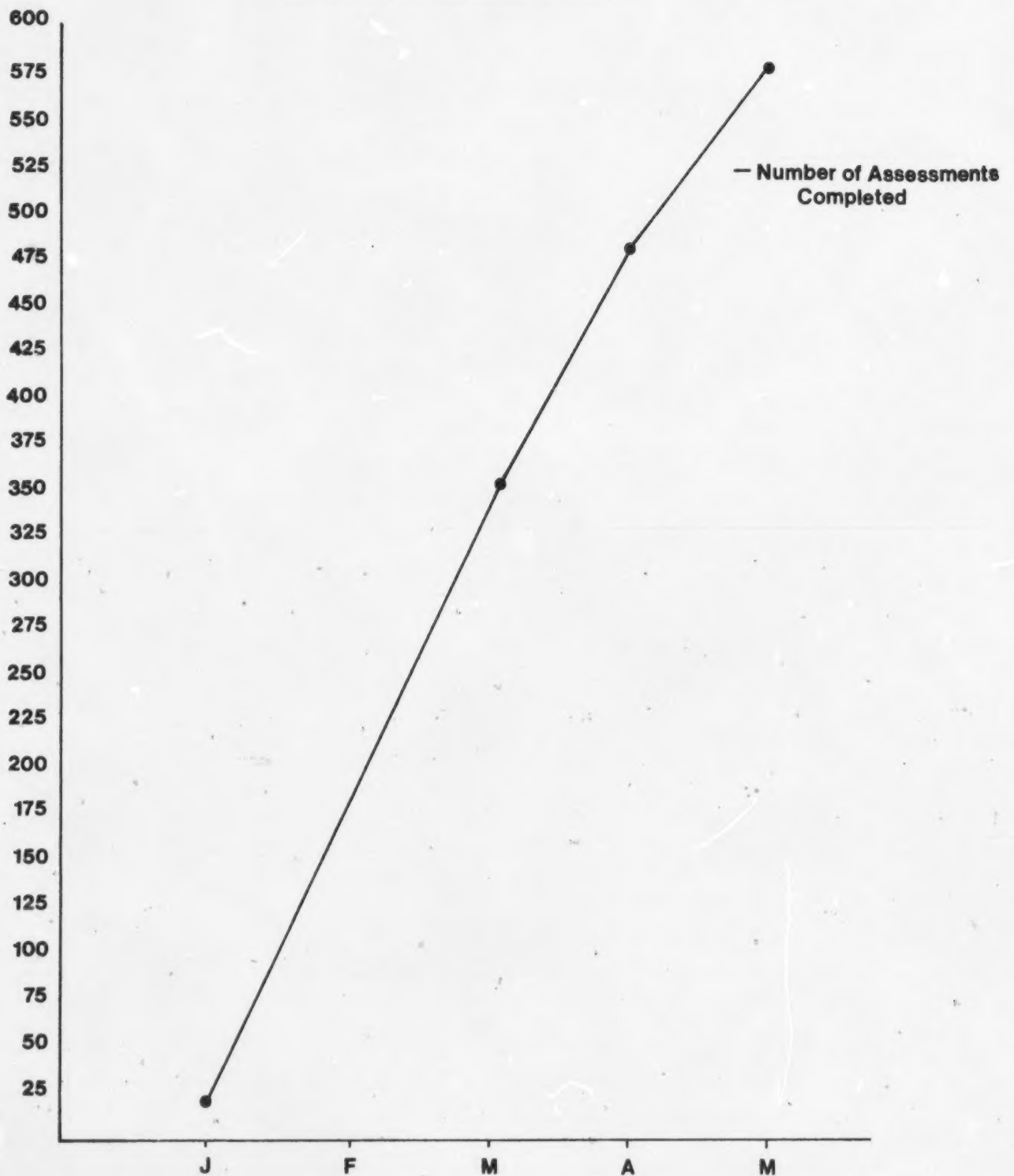


TABLE 34
Community Living Skills Validation
(N = 107)

Resident	Average Percentage of Items Passed	Weighted Score	Caretaker's Rating
1	48.17	2	2
2	44.66	2	2
3	40.33	2	2
4	83.66	3	3
5	73.83	3	3
6	97.00	3	3
.			
.			
107	3.50	1	1
$r = .92$			

In addition to the formative validation, a cross validation study is currently being planned in cooperation with the Community Mental Health Board of Lansing, Michigan. The intended design involves the demonstration of content validity of the Community Living Skills Instrument by correlating it with one already established instrument. The Progress Assessment Chart (PAC, Gunzberg, 1972) and another experimental instrument called Residential Environment-Analysis (Heiny, 1976).

In sum, the Community Living Skills Instrument has demonstrated very good psychometric properties concerning reliability and validity. It is hoped that the data base of the instrument will be broadened when facilities employing the instrument collect further data which reflect specific needs and/or conditions prevailing at the agency using the Community Living Skills

Instrument. In addition, some sort of follow-up research seems to be desirable to determine which of the eight subscales or which combination of subscales is the best predictor of successful community living.

CHAPTER VIII

DISCUSSION AND CONCLUSION

This project focused on assessments/evaluations systems for the institutionalization services and education programs for the moderately to profoundly mentally retarded. Overall, the focus was on the development and validation of a three phase assessment system designed to assist in the process of de-institutionalization of individuals with mental retardation through a continuum of services. This services continuum moves from programs designed to provide long term intensive care to those designed to provide minimum supervision options. This service continuum has also been conceptualized as a conversion plan (Blatt, Bogdan, Biklen, Taylor, 1977). The conversion plan is to defined as an orderly transition from an institution to a community based system of services. It is important that services within this system be provided as a right of citizens rather than a privelege or a matter of charity (Biklen, 1974). In addition, services must be delivered on a non-catagorical (non-discriminatory) basis. This means that the need of the individual, and not his catagory or label such as, "mentally retarded", will determine the services he needs. Finally, services must be administered under the least restrictive, most "normalized" circumstances (Wolfensberger, 1972). And immediate consequence of this mandate is the assumption that every person should have a maximum opportunity to live with dignity in the community. This in turn implies that an emphasis needs to be placed on independent rather than supervised living: integrated rather than segragrated schooling: and regular rather than sheltered employment (Blatt, 1977).

In view of some of these reconceptualizations of services for the mentally retarded, this project undertook to deal with the problems related to identifying

transition and entry skills to programs for the moderately to profoundly mentally retarded which until now have not been adequately developed as indicated in the literature review at the beginning of this report. The most important conclusion drawn from this review is that past assessment systems were primarily diagnostic rather than prescriptive. However, according to the present service philosophy dictated by the normalization principle, assessment procedures must be prescriptive. Assessment and monitoring information should be directed to identifying what needs to be taught rather than classifying individuals as to etiology or symptomatology. The output from such a diagnostic scheme based on affective assessment should be descriptive, ie: naming the skill area in which the individual has reached proficiency and those skill areas in which mastery is required in order to achieve a functional level which is appropriate for the planned community placement.

Past research evaluating the assessment of the abilities of the mentally retarded questioned the usefulness of traditional tests for several reasons. First, the response requirement of many assessment devices frequently penalizes the moderately and severely mentally retarded, a population replete with multiple handicapping conditions (O'Connor, Justice & Payne, 1970). In addition to a variety of physical handicaps which might interfere with test performance, there is a high incidence of speech and language problems among these persons which further handicap the individual. Second, many conventional tests assume that the person has a normal experiential background from which he had learned spontaneously (Clarke & Clarke, 1967). Third, many of the traditional approaches to assessment have relied on the concept of measured intelligence as the sole criterion of mental retardation but without setting a cut off IQ of 60 below

which a person is considered to be "sub-normal". This approach is regarding mental retardation as a unidimensional phenomenon related primarily to intellectual functioning. An immediate corollary is the assumption that the mentally retarded form a relatively homogeneous group of persons with low intelligence who differ mainly from one another in the fact that some have slightly more and some slightly less of this particular attribute (Mercer, 1973b). Consequently, it is assumed that the distribution of I.Q. test scores among the mentally retarded can be adequately described by the negative tail of a normal distribution. However, there is considerable evidence that this is not the case. For example, several investigators (Dingman & Tarjan, 1960; Sigler, 1967) concluded that the mentally retarded population consists of at least two subgroups comprising two clearly defined distributions, one with an IQ range from 0 to 55 and the second one with an IQ which is no lower than 55.

In addition, recent research suggest that IQ scores are misleading for those persons who demonstrate a substantial increment following a brief training session (Hamilton & Budoff, 1974). For these individuals, it seems reasonable to assume that a history of less than adequate learning opportunities rather than lack of learning potential accounts for the deficits apparent in the test situation.

These assumptions and assessment shortcomings clearly suggested the need for new assessment formats which could be used programmatically for evaluating the skills of the moderately to severely mentally retarded and which would provide the best opportunity to design learning situations which could be evaluated as to determine if teaching is providing the desired changes in skill level.

In the development of the three-phase assessment system an attempt was

made to introduce instruments which could fill present gaps in the behavioral assessment of mentally retarded individuals by providing information that is maximally meaningful and most directly related to training and programming.

Assessment not only has a quantitative dimension but also includes, the qualitative and integrated characterization of the person as a dynamic complex individual functioning in a social setting. With regard to the mentally retarded person who is receiving competence training for community living, much of his social environment is determined by the quality of services appropriate for the needs of the individual. If the person is to change his role from one of helplessness, dependency, and social inadequacy to one of independence and individuality he requires two fundamental services. First, a comprehensive education program is necessary which provides the appropriate social context and environmental supports to achieve maximum independence. However, training mentally retarded individuals requires exceptional programming techniques (Haring, 1977). One of the most important aspects of training is assessment. More specifically, however, measurement of an individual's performance must allow the teacher to determine skill levels of functioning in the relevant areas of development. Without a thorough knowledge of the person's status in cumulative skills, the formulation of teaching programs and the sequencing of steps within a given program becomes impossible. In short, programmatically meaningful assessments are a vital component of the teaching process.

The overall goal of this project, was to integrate recent conceptual trends and the resulting practical consequences into a comprehensive assessment system which takes the philosophy of normalization and the current emphasis on community integration into account. During the first project year, the Pre-Entry Screening Instrument was developed to facilitate the

initiation of the community integration process by identifying individuals from existing institutional or non-programmatic placement as prospective candidates for community-based program. The Pre-Entry Screening Instrument allows the collection of maximal information in a minimal period of time. It provides objective data for the potential receiving program or environment to make decisions regarding the appropriateness of a person's educational and/or living situation. In addition to having demonstrated good reliability and validity, the Pre-Entry Screening Instrument has also been successfully used in assessment conducted over the telephone. In this case, the receiving environment contacts the sending facility to set up an appointment with the staff member who has a thorough knowledge of the individual who is being considered for transfer. Upon availability of the staff member, he or she is interviewed on the telephone to respond to the items on the Pre-Entry Screening Instrument. The data collected is then summarized in form of a personal description of the individual highlighting his behavioral assets as well as pointing out inappropriate behaviors or skill deficits.

The Pre-Entry Screening Instrument was used routinely by Social Services staff at SEVTC to systematically screen the resident populations in the two large state institutions as well as individuals in the community. The second project year focused primarily on the development and validation of the Post-Entry Monitoring Instrument.

This instrument consists of two different versions: they are a pre-school form to be used with the younger handicapped child from birth to about the age of eight (Post-Entry Monitoring Instrument, Form A) and an adolescent/adult form which is appropriate for the ages eight to late middle age (Post-Entry Monitoring Instrument, Form B). Together, these two instruments make up the SEVTC Post-Entry Scales.

The Post-Entry Scales are intended for training facilities or agencies with systematic, continuously ongoing programming. At this stage of the community integration process, the availability of accurate, detailed assessment data is particularly crucial, since premature release into less restrictive community settings may lead to unsuccessful adjustment to community life and/or possible return to the institution. The adequate selection and training of individuals for community living is probably the major emphasis in applying the normalization principle, since normalization objectives have been particularly responsible for the incorporation of adaptive behaviors into habilitation programs.

The Post-Entry Monitoring Instrument with its direct relevance to developmental training has been tried by several mental retardation facilities and agencies around the country as a sound basis for programming for handicapped individuals. Two major reasons accounting for the adoption of the Post-Entry Monitoring Instrument are: (1) the instrument measures behavior changes in predictable, sequential ways, and (2) based on the detailed data derived from post-entry assessments, the instruments facilitate the implementation of training programs to increase the person's adaptive behavior. In short, when employed for baseline and monitoring purposes, the Post-Entry Monitoring Instrument can play a vital service role in program planning, implementation and evaluation of pre-school children and adolescent/adult mentally retarded individuals.

Third year research concentrated on the development of the final instrument designed to provide managers and staff of community based programs with an assessment tool to measure skill proficiency of individuals who have been released into a variety of community based living options. The main objective

at this level of the community integration process was to develop an instrument assessing skills and behaviors relevant to successful adjustment to community living.

Systematic data on the adjustment of persons in the community and the specific nature of their adaptive problems are largely unavailable at the present time. As critical demands required of individuals living in the community are identified some standards, interests and concerns regarding acquired skills and interpersonal skills are gradually emerging. For example, Nihara and Nihara (1975) isolated a number of adaptive behaviors which were found to be significant determinants of success. Among these were abilities such as performing simple domestic tasks, moving around the community safely and independently, handling simple money matters, and communicating verbally. However, the concern is not only with acquired self-care and domestic skills but also with the individual's ability to interact socially with members of his community in an appropriate manner. For example, Birenbaum (1975) pointed out that many individuals released from residential facilities display an apparent lack of social skills. While deficits in the area of interpersonal skills might not be considered important enough to require attention in the institutional environment, the inability to behave in a socially appropriate manner may be the major problem interfering with successful adjustment in community placement options.

The Community Living Skills Instrument examines skill areas that are directly relevant to living in community alternatives. The behaviors are assessed in an "all-or-none" fashion, since managers and staff of CLA's are less concerned with degrees of behavior. At this stage, the important information is whether or not the person can perform a given skill. Managers of CLA's in the Southeastern region typically reported that if the handicapped

person needs assistance to execute a certain skill, he is for all matter and purposes deficient in that area. In view of the limited staff capacity in most participating CLA's it is apparent that staff is more concerned with maintaining individuals at already acquired skill proficiency rather than continuous training of new skills. That is, a minimal level of functioning is required of individuals entering into community placement. Part of the minimal entry requirement assumes that the person can perform basic skills when requested to do so rather than needing modeling or physical assistance.

One important aspect of the Community Living Skills Instrument concerns the fact that the Instrument assesses both the behavior of the handicapped person and the resources of the receiving environment. The assumption here is that optimal behavioral competence can only be developed when the balance between a person's behavior and access to resources is sufficient for daily life like most people like it (Heiny & Stachowiak, 1976). The Environmental Analysis/Checklist of Community Resources component is a direct attempt to examine the prospective residence in question. Providing the best fit between a person's level of functioning and the availability of special services in the community results in placements which maximize the handicapped person's degree of independence.

The four instruments which make up The SEVTC Assessment Scales, although different in content, share at least two commonalities. The Post-Entry Monitoring Instrument, Parts A & B, and the Community Living Skills Instrument can be used in a training-within-testing model (Schucman, 1960). The proposed paradigm consists of pre- and post-testing with an intervening session of task relevant instruction on similar non-test items. Each individual assessed will fall into one of three categories: (1) those who demonstrate a substantial increment as a function of the coaching experience, i.e. gainers, (2) those who

do not seem to profit from the training experience (nongainers), and (3) those who scored high on the pre-test (high scorers). The experimental variable of coaching should be introduced several days after the first assessment. In addition, residents should be matched on relevant demographic variables, level of functioning, degree of handicap, etc. After a specified period of time, the trained and controlled persons are retested to determine the effects of the coaching intervention. The major advantage of this training within assessment model is the fact that the testing situation is substantially altered to include supportive training rather than creating a stressful situation replete with failure. In general, this model provides an effective means for evaluating mentally retarded persons to determine skills which they have for community living. In addition, the training-within-testing paradigm is consistent with the goals of monitoring progress leading to community integration.

The SEVTC Assessment system encourages the involvement of paraprofessionals in the assessment process. The four junior high instruments can be administered and scored by a person with a juniorline school reading level, while the majority of assessment devices in the field of mental retardation require a trained professional. Involving the immediate program manager, whether paraprofessional staff, parent or professional/teacher, has two important consequences. First, it gives the responsible person a meaningful basis for evaluating the behavioral competence of the developmentally disabled individual. Another important consequence derived from the involvement of direct care staff deals with the intrinsic reinforcement staff and parents' experience when they observe behavioral gains of handicapped individuals. For example, it is much more meaningful for an aide to have a graph depicting pre- to post-test gains scores visually available rather than having the same information stored in a file in the Center's psychologist's office. For the aide, gain scores mean that he or she made an active contri-

bution to the person's progress. In turn, this sense of achievement will further motivate the aide to work even more intensively with the person in his/her care.

If community integration is the ultimate goal for the majority of mentally retarded individuals, the handicapped person needs the experience of living in a community. However, there are presently a number of needs which have to be met before community living becomes a reality for most handicapped individuals. First, there is a definite need for defining criteria or competencies which represent adjustment. While some consider a person to be a success as long as he remains in the community and a failure if he requires reinstitutionalization, others advocate the development of behavioral norms in a variety of areas (Rosen, 1967; Windle, 1962). The developmental research of the Community Living Skills Instrument clearly indicated that regardless of the individual's assets, his behavior has to meet some minimal standards in a number of domains for him to be tolerated in the community. Rosen et al. (1971) have suggested that personality variables should also be considered in determining criteria of adjustment because these strongly influence interpersonal relations, job stability, satisfaction with one's existence, and other measures of adjustment that are commonly used as criteria. Precise and consistent adjustment criteria are necessary prerequisites for successful transition to community living and for assessing community adjustment.

Another important area which has direct bearing on the success of the community integration movement deals with the need to study the relation between previous training and later success. There is virtually no data that asks the question of what types of training are more justifiable in terms of community adjustments. Furthermore, there are no descriptions in the literature indicating which community activities reflect former training, which activities have been

handled without prior programming, and what the person still has to know in order to learn under more effective training procedures.

Finally, there is a need for understanding the attitudes of mentally retarded individuals who are making the transition to independent living in the community. In other words, the personal reactions of the handicapped person to the critical events represented by transfer along the service continuum have been hardly investigated. Rosen et al. (1971) and Zigler (1966) along with others have emphasized the negative effects that lowered levels of aspiration and unrealistic expectancies of success held by the mentally retarded person may have upon his behavior. If the individual changes his cognition following a discharge from the institution or upon entering a sheltered workshop, the detection and assessment of such changes would provide meaningful information concerning his level of functioning.

Filling these gaps and accomplishing the goal of community integration necessitates continuous assessment of the critical processes, individual as well as environmental. It is hoped that this assessment system makes a contribution to facilitate the attainment of service goals by providing a set of instruments that are closely related to measurable characteristics of the individual as well as being relevant to training objectives. Since the development of evaluation techniques for assessing community skills has only scratched the surface, this assessment system may only serve as a beginning.

In sum, then, each instrument of the SEVTC Assessment Scales for Community Integration differs in scope and complexity of skill levels assessed at various stages of deinstitutionalization. At each state of the community integration process, i.e. nonprogrammatic environment - systematic training - community living - different criteria dictated the content of each instrument. All four instruments have proven to be useful assessment tools not only for measuring

skill acquisition but also for evaluating the effectiveness of programmatic intervention. The degree to which additional application and practical consequences are discovered through further assessments will depend upon the specific criteria or terminal goals set for the handicapped individual moving on the continuum of services from institutional to community living.

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